WX-GT90BT/GT90BTE/ GT99BT

SERVICE MANUAL

Ver. 1.0 2012.12

US Model
Canadian Model
AEP Model
UK Model
E Model
WX-GT90BT
Russian Model
WX-GT90BTE
Indian Model
WX-GT99BT



Photo: WX-GT90BT

- The tuner and CD sections have no adjustments.

Model Name Using Similar Mechanism	MEX-BT4100U/ WX-GT80UE/GT80UI/GT88UI
Mechanism Type	MG-101CA-188
Optical Pick-up Name	DAX-25A

SPECIFICATIONS

(US and Canadian models only)
FOR UNITED STATES CUSTOMERS. NOT APPLICABLE IN CANADA, INCLUDING IN THE PROVINCE OF QUEBEC.

POUR LES CONSOMMATEURS AUX ÉTATS-UNIS. NON APPLICABLE AU CANADA, Y COMPRIS LA PROVINCE DE QUÉBEC.

(US and Canadian models only)
AUDIO POWER SPECIFICATIONS

CEA2006 Standard
Power Output: 17 Watts RMS × 4 at 4 Ohms < 1% THD+N
SN Ratio: 80 dBA
(reference: 1 Watt into 4 Ohms)

Tuner section (US and Canadian models)

FM
Tuning range: 87.5 – 107.9 MHz
Antenna (aerial) terminal:
External antenna (aerial) connector
Intermediate frequency: 25 kHz
Usable sensitivity: 8 dBf
Selectivity: 75 dB at 400 kHz
Signal-to-noise ratio: 80 dB (stereo)
Separation: 50 dB at 1 kHz
Frequency response: 20 – 15,000 Hz

AM
Tuning range: 530 – 1,710 kHz
Antenna (aerial) terminal:
External antenna (aerial) connector
Intermediate frequency:
9,115 kHz or 9,125 kHz/5 kHz
Sensitivity: 26 µV

Tuner section (AEP and UK models)

FM
Tuning range: 87.5 – 108.0 MHz
Antenna (aerial) terminal:
External antenna (aerial) connector
Intermediate frequency: 25 kHz
Usable sensitivity: 8 dBf
Selectivity: 75 dB at 400 kHz
Signal-to-noise ratio: 80 dB (stereo)
Separation: 50 dB at 1 kHz
Frequency response: 20 – 15,000 Hz

MW/LW
Tuning range:
MW: 531 – 1,602 kHz
LW: 153 – 279 kHz
Antenna (aerial) terminal:
External antenna (aerial) connector
Intermediate frequency:
9,124.5 kHz or 9,115.5 kHz/4.5 kHz
Sensitivity: MW: 26 µV, LW: 45 µV

Tuner section (Russian model)

FM
Tuning range:
FM1/FM2: 87.5 – 108.0 MHz (at 50 kHz step)
FM3: 65 – 74 MHz (at 30 kHz step)
Antenna (aerial) terminal:
External antenna (aerial) connector
Intermediate frequency: 25 kHz
Usable sensitivity: 8 dBf
Selectivity: 75 dB at 400 kHz
Signal-to-noise ratio: 80 dB (stereo)
Separation: 50 dB at 1 kHz
Frequency response: 20 – 15,000 Hz

MW/LW
Tuning range:
MW: 531 – 1,602 kHz
LW: 153 – 279 kHz
Antenna (aerial) terminal:
External antenna (aerial) connector
Intermediate frequency:
9,124.5 kHz or 9,115.5 kHz/4.5 kHz
Sensitivity: MW: 26 µV, LW: 45 µV

Tuner section (E and Indian models)

FM
Tuning range:
87.5 – 108.0 MHz (at 50 kHz step)
87.5 – 108.0 MHz (at 100 kHz step)
87.5 – 107.9 MHz (at 200 kHz step)
FM tuning step:
50 kHz/100 kHz/200 kHz switchable
Antenna (aerial) terminal:
External antenna (aerial) connector
Intermediate frequency: 25 kHz
Usable sensitivity: 8 dBf
Selectivity: 75 dB at 400 kHz
Signal-to-noise ratio: 80 dB (stereo)
Separation: 50 dB at 1 kHz
Frequency response: 20 – 15,000 Hz

AM
Tuning range:
531 – 1,602 kHz (at 9 kHz step)
530 – 1,710 kHz (at 10 kHz step)
AM tuning step: 9 kHz/10 kHz switchable
Antenna (aerial) terminal:
External antenna (aerial) connector
Intermediate frequency:
9,124.5 kHz or 9,115.5 kHz/4.5 kHz
(at 9 kHz step)
9,115 kHz or 9,125 kHz/5 kHz
(at 10 kHz step)
Sensitivity: 26 µV

CD Player section

Signal-to-noise ratio: 120 dB
Frequency response: 10 – 20,000 Hz
Wow and flutter: Below measurable limit

USB Player section

Interface: USB (Full-speed)
Maximum current: 1 A

Wireless Communication

Communication System:
Bluetooth Standard version 2.1 + EDR
Output:
Bluetooth Standard Power Class 2
(Max. +4 dBm)
Maximum communication range:
Line of sight approx. 10 m (33 ft)*1
Frequency band:
2.4 GHz band (2.4000 – 2.4835 GHz)
Modulation method: FHSS
Compatible Bluetooth Profiles*2:
A2DP (Advanced Audio Distribution Profile) 1.2
AVRCP (Audio Video Remote Control Profile) 1.3
HFP (Handsfree Profile) 1.5
PBAP (Phone Book Access Profile)
SPP (Serial Port Profile)

*1 The actual range will vary depending on factors such as obstacles between devices, magnetic fields around a microwave oven, static electricity, reception sensitivity, antenna (aerial)'s performance, operating system, software application, etc.

*2 Bluetooth standard profiles indicate the purpose of Bluetooth communication between devices.

Power amplifier section

Output: Speaker outputs
Speaker impedance: 4 – 8 ohms
Maximum power output: 52 W × 4 (at 4 ohms)

General

Outputs:
Audio outputs terminal (front, rear, sub)
Power antenna (aerial)/Power amplifier control terminal (REM OUT)
Inputs:
SiriusXM input terminal
(US and Canadian models only)
Remote controller input terminal
Antenna (aerial) input terminal
MIC input terminal
AUX input jack (stereo mini jack)
USB port
Power requirements: 12 V DC car battery
(negative ground (earth))
Dimensions: Approx. 178 × 100 × 178 mm
(7 1/8 × 4 × 7 1/8 in) (w/h/d)
Mounting dimensions: Approx. 182 × 111 × 159 mm (7 1/4 × 4 3/8 × 6 3/8 in) (w/h/d)
Mass: Approx. 1.4 kg (3 lb 2 oz)
Supplied accessories:
Remote commander: RM-X231
Microphone
Parts for installation and connections (1 set)

Design and specifications are subject to change without notice.

Bluetooth® AUDIO SYSTEM

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2012L33-1

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SONY®

For the State of California, USA only
Perchlorate Material – special handling may apply, See www.dtsc.ca.gov/hazardouswaste/perchlorate
Perchlorate Material: Lithium battery contains perchlorate

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• US and Canadian models:
CAUTION
The use of optical instruments with this product will increase eye hazard.

CAUTION
Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

NOTES ON CHIP COMPONENT REPLACEMENT

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

FLEXIBLE CIRCUIT BOARD REPAIRING

- Keep the temperature of soldering iron around 270 °C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

SAFETY-RELATED COMPONENT WARNING!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

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LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

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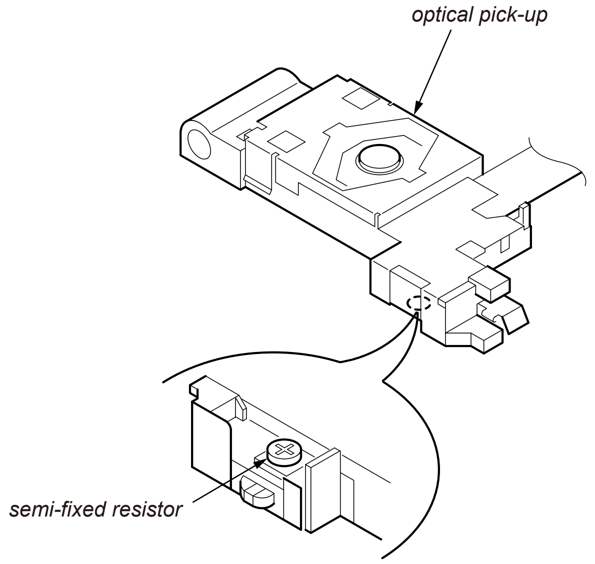
NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic break-down because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body. During repair, pay attention to electrostatic break-down and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

Never look into the laser diode emission from right above when checking it for adjustment. It is feared that you will lose your sight.

If the optical pick-up block is defective, please replace the whole optical pick-up block.
Never turn the semi-fixed resistor located at the side of optical pick-up block.



UNLEADED SOLDER

Boards requiring use of unleaded solder are printed with the lead-free mark (LF) indicating the solder contains no lead.
(**Caution:** Some printed circuit boards may not come printed with the lead free mark due to their particular size)

: LEAD FREE MARK

Unleaded solder has the following characteristics.

- Unleaded solder melts at a temperature about 40 °C higher than ordinary solder.
  Ordinary soldering irons can be used but the iron tip has to be applied to the solder joint for a slightly longer time.
  Soldering irons using a temperature regulator should be set to about 350 °C.
  Caution: The printed pattern (copper foil) may peel away if the heated tip is applied for too long, so be careful!
- Strong viscosity
  Unleaded solder is more viscous (sticky, less prone to flow) than ordinary solder so use caution not to let solder bridges occur such as on IC pins, etc.
- Usable with ordinary solder
  It is best to use only unleaded solder but unleaded solder may also be added to ordinary solder.

NOTE THE MAIN BOARD OR SYSTEM CONTROLLER (IC501) REPLACING

When the MAIN board or system controller (IC501) is replaced, the destination setting is necessary.

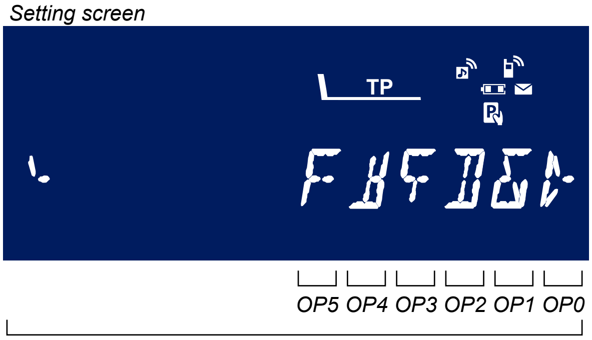
1. Prior Setting

It is necessary to set with the remote commander so that it can operate by the main unit.

Setting method:

1. In the state of power on, press the buttons in order of the [4] → [5] → [6] on the remote commander (press only the [6] button for two seconds).
2. Press the buttons in order of the [➡] → [⬅] → [ENTER] on the remote commander.

Setting screen



12 digit

3. Press the buttons in order of the [ENTER] (four times) → [⬇] → [ENTER] (two times) on the remote commander.
4. Setting is completed, and the unit returns to the state of source off (the clock is displayed on the liquid crystal display).

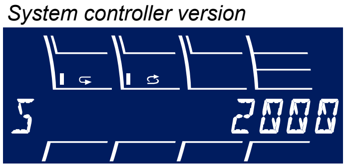
2. Destination Setting

Set destination according to the procedure below.

2-1. Setting the Destination Code

1. In the state of source off (the clock is displayed), enter the test mode by pressing the buttons in order of the [⟲ 4] → [MIC/ZAP 5] → [PAUSE 6] (press only the [PAUSE 6] button for two seconds).
2. In the state in which the system controller version is displayed on the liquid crystal display (refer to following figure), enter the destination setting mode by pressing the buttons in order of the [▶▶ ▶▶| SEEK+] → [SEEK– |◀◀ ◀◀] → [PUSH ENTER/MENU/▬ APP].
   (Displayed characters/values in the following figure are example)

System controller version



3. Input the alphanumeric character of 12 digits of "F XXXXXX" displayed on the liquid crystal display, and execute the destination setting.

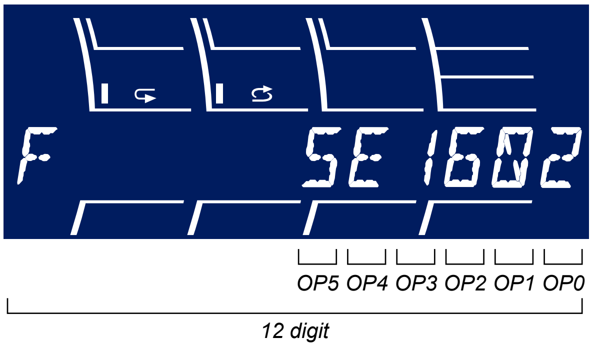
Note: Refer to following "2-3. Entering the Destination Code" for operation method.

4. The resetting operation is executed by pressing the [SOURCE ▬ OFF] button for 1 second after the setting ends, and the unit returns to the normal condition.

2-2. Display in Destination Setting Mode

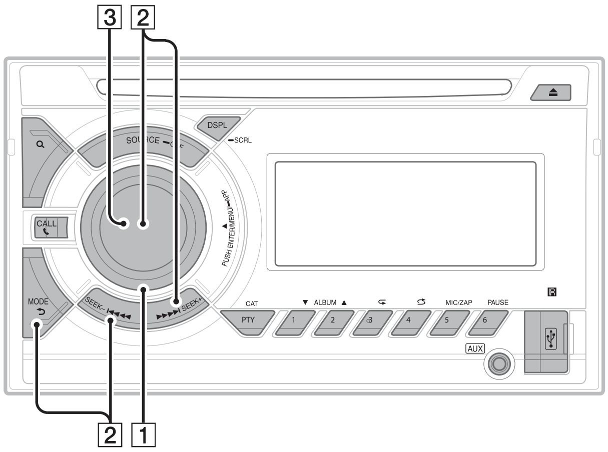
(Displayed characters/values in the following figure are example)

Destination code



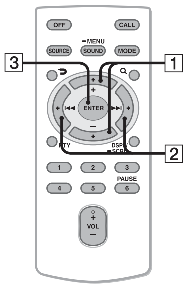
2-3. Entering the Destination Code

- **Method of operation by main unit**



1. Rotate the control dial, and select the alphanumeric character of "0 to F".
2. The digit advances by pressing the [PUSH ENTER/MENU/▬ APP] or [▶▶ ▶▶| SEEK+] button.
   The digit returns by pressing the [MODE ⮌] or [SEEK– |◀◀ ◀◀] button.
3. The setting is completed by pressing the [PUSH ENTER/MENU/▬ APP] button, and the initialization operation is done.

- **Method of operation by remote commander**



1. Press the [⬆] or [⬇] button, and select the alphanumeric character of "0 to F".
2. The digit advances by pressing the [➡] button.
   The digit returns by pressing the [⬅] button.
3. The setting is completed by pressing the [ENTER] button, and the initialization operation is done.

2-4. Destination Code

Model	Destination	OP5	OP4	OP3	OP2	OP1	OP0
WX-GT90BT	US, Canadian	5	E	1	6	0	2
	AEP, UK	4	C	1	6	0	1
	E	6	C	1	E	0	0
WX-GT90BTE	Russian	C	C	1	6	2	7
WX-GT99BT	Indian	6	C	1	E	1	0

3. Confirmation After Destination Setting

Execute the following operation after completing the destination setting, and confirm a correct destination was set.

Destination setting checking method:

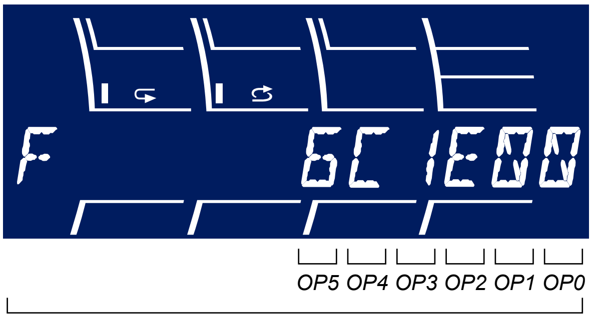
1. In the state of source off (the clock is displayed on the liquid crystal display), enter the test mode by pressing the buttons in order of the [↻ 4] → [MIC/ZAP 5] → [PAUSE 6] (press only the [PAUSE 6] button for two seconds).
2. In the state in which the system controller version is displayed on the liquid crystal display (refer to following figure), enter the destination setting value display mode by pressing the [DSPL • SCRL] button three times.
   (Displayed characters/values in the following figure are example)

System controller version



3. Confirm the alphanumeric character of 12 digits in liquid crystal display is an value correctly input.
   (Displayed characters/values in the following figure are example)

Destination code



4. The resetting operation is executed by pressing the [SOURCE • OFF] button for 1 second after the confirming ends, and the unit returns to the normal condition.

TEST DISCS

Use following TEST DISC (for CD) when this set confirms the operation and checks it.

Part No.	Description
3-702-101-01	DISC (YEDS-18), TEST
4-225-203-01	DISC (PATD-012), TEST

NOTE FOR REPLACEMENT OF THE BT BOARD

When repairing, the complete BT board should be replaced since any parts in the BT board cannot be repaired.

NOTE FOR REPLACEMENT OF THE SERVO BOARD

When repairing, the complete SERVO board should be replaced since any parts in the SERVO board cannot be repaired.

NOTE FOR REPLACEMENT OF THE SENSOR BOARD

When the SENSOR board is defective, exchange the MECHANICAL BLOCK ASSY.

IMPORTANT NOTE OF "INITIALIZING"

The purpose of "Bluetooth Initialize" is to initialize the Bluetooth connection history (HF/Audio Streaming). (To delete the device information for the devices that you connected to when searching, etc.)
When the complete BT board or complete MAIN board (including BT board) are replaced, it is necessary to initialize this unit.
Refer to the following, initialize this unit.

Note: Phonebook data and dialed/received call history can be deleted by executing "Reset."

Initializing Bluetooth Settings

You can initialize all the Bluetooth related settings (pairing information, preset number, device information, etc.) from this unit.

1. **Press and hold (SOURCE/OFF) for 1 second to turn off the power.**
2. **Press (MENU), rotate the control dial until "BT" appears, then press it.**
   The menu list appears.
3. **Rotate the control dial to select "BT INIT," then press it.**
   The confirmation appears.
4. **Rotate the control dial to select "INIT-YES," then press it.**
   "INITIAL" flashes while initializing the Bluetooth settings; "COMPLETE" appears when initializing has finished.
5. **Press ↶ (BACK) to return to the previous display.**

Note

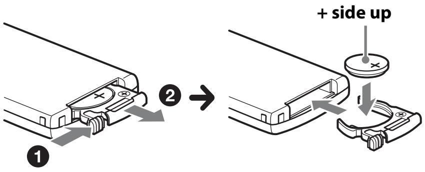
When disposing of this unit, preset numbers should be deleted with "BT INIT."

NOTE ON CONNECTION

If speaker and amplifier are not connected correctly, "FAILURE" appears in the display. In this case, make sure the speaker and amplifier are connected correctly.

REPLACING THE LITHIUM BATTERY OF THE REMOTE COMMANDER

When the battery becomes weak, the range of the remote commander becomes shorter. Replace the battery with a new CR2025 lithium battery. Use of any other battery may present a risk of fire or explosion.



Notes on the lithium battery

- Keep the lithium battery out of the reach of children. Should the battery be swallowed, immediately consult a doctor.
- Wipe the battery with a dry cloth to assure a good contact.
- Be sure to observe the correct polarity when installing the battery.
- Do not hold the battery with metallic tweezers, otherwise a short-circuit may occur.

WARNING
Battery may explode if mistreated.
Do not recharge, disassemble, or dispose of in fire.

CANCELING THE DEMO MODE

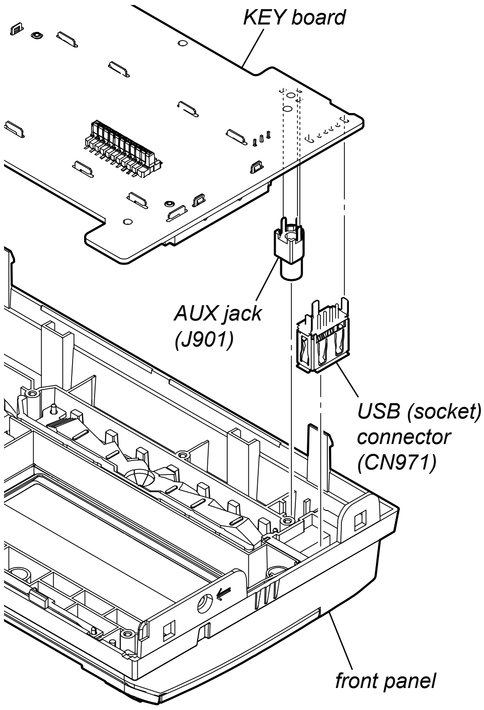
You can cancel the demonstration display which appears while this unit is turned off.

1. **Press (MENU), rotate the control dial until "DISPLAY" appears, then press it.**
2. **Rotate the control dial until "DEMO" appears, then press it.**
3. **Rotate the control dial to select "DEMO-OFF," then press it.**
   The setting is complete.
4. **Press ⮌ (BACK) to return to the previous display.**
   The display returns to normal reception/play mode.

NOTE FOR REPLACEMENT OF THE USB CONNECTOR (CN971) AND THE AUX JACK (J901)

To replace the USB connector and AUX jack requires alignment.

1. Insert the USB connector and AUX jack into the front panel.
2. Place the KEY board on the front panel and align the terminals of the USB connector and AUX jack with the holes in the KEY board.
3. Solder seven terminals of the connector and three terminals of the jack.

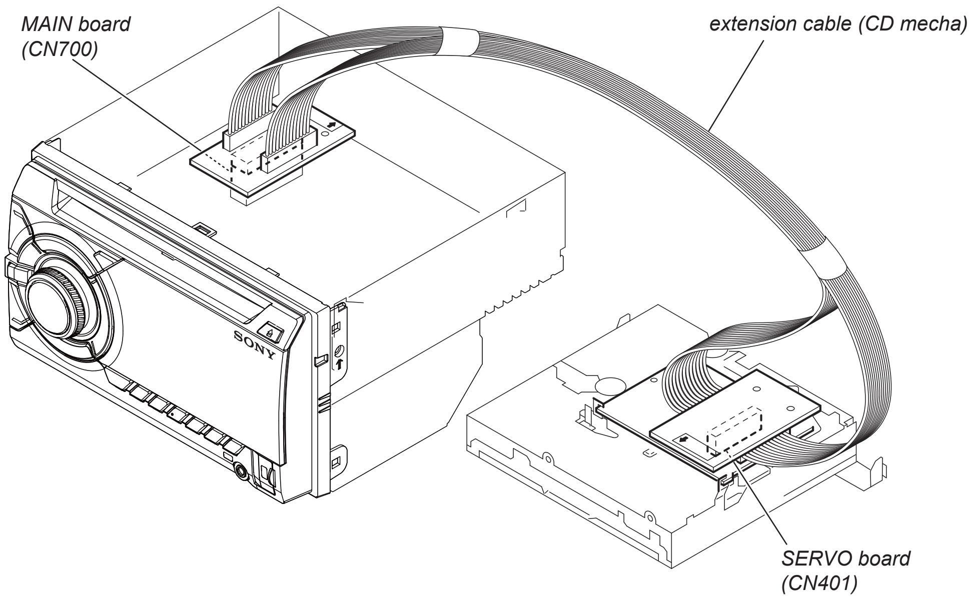


EXTENSION CABLE AND SERVICE POSITION
When repairing or servicing this set, connect the jig cable (extension cable (CD mecha)) as shown below.

- Connect the MAIN board (CN700) and the SERVO board (CN401) with the jig cable.

Jig cable:

Part No.	Description
A-1818-424-A	EXTENSION CABLE (CD MECHA)



BLUETOOTH FUNCTION CHECKING METHOD USING A CELLULAR PHONE

1. Required Equipment

- Set to be tested (WX-GT90BT/GT90BTE/GT99BT), external microphone of attachment
- Cellular phone (Recommended SEMC W880 or W910i, or select from connectable cellular phones list)
- Bluetooth audio devices (SONY NWZ-A826, or select from connectable cellular phones/audio devices list)
- Speaker connection (at least Front L/R ch)
- DC power supply (12 V)

2. Preparation

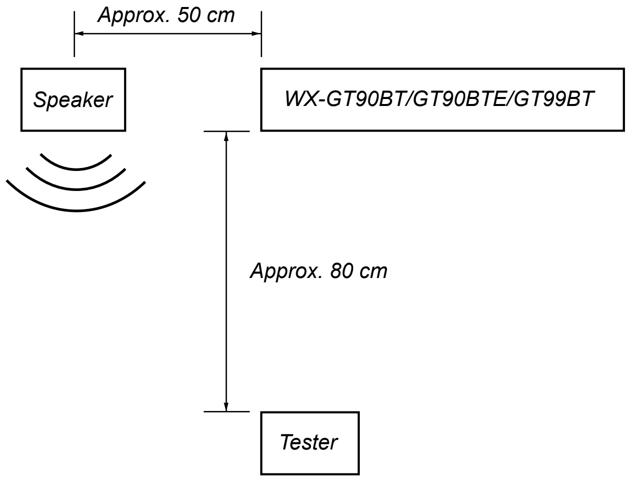
- Confirm the setting of the WX-GT90BT/GT90BTE/GT99BT, and note down it.
- Press the [CALL] button and rotate the control dial until "SET PAIRING" appears, then press it, confirm that the Bluetooth signal icon ( ) is flashing.
- Turn on the Bluetooth function of the cellular phone.

3. Test Environment

- No other Bluetooth device is making a communication in the periphery (within 20 m).
- No other WX-GT90BT/GT90BTE/GT99BT are supplied with electric power.
- There are no two or more wireless LAN access points in the periphery (with 50 m) (one is OK).
- The set should be tested in a place such as a meeting room, free from ambient noise.
- The speaker at the far end should be in a place such as another meeting room separated acoustically.

4. Setting

Install the WX-GT90BT/GT90BTE/GT99BT on the desktop.



5. Precautions

Beware of the following points when conducting the talking test:

- There is no fault if a talking can be made by adjusting appropriately the volume of the telephone of the other party and the cellular phone connected through the Bluetooth, besides the setup of WX-GT90BT/GT90BTE/GT99BT.
- The speaker's voice will become loud naturally if the periphery is noisy, or become low if quiet (even though the speaker intents to talk on the same volume level).
- The speaker's voice will become loud naturally if the other party's voice is loud.

6. Bluetooth Phone (Hands Free) Function Check

Note 1: Depending on the connecting device, Signal-strength/Battery-remaining indications might not be displayed.
Or, depending on the connecting device, the levels of indications are shown incorrectly.
Even if you see no indications or wrong indications, they are not failures of WX-GT90BT/GT90BTE/GT99BT.

1. Search for this unit from the Bluetooth device (cellular phone), and confirm whether this unit ("Sony Automotive") is displayed.
2. Search for the distance of this unit and the Bluetooth device (cellular phone) about 5 m apart.
   Confirm whether the Bluetooth device (or this unit) is displayed after it searches.
3. Do the pairing of the cellular phone and this unit (input of passkey).
4. Connect the cellular phone with this unit, and confirm the "HF" icon ( ) lights.
5. Confirm the connection continues even if the distance of the cellular phone and this unit is separated by about 5 m.
6. Set this unit besides the "BT PHONE" source, and call the cellular phone connected with this unit.
   Confirm the automatic change of this unit into "BT PHONE" source, and the change into the screen for incoming calls.
   Confirm the ring tone is heard from the front speaker.
7. Take a phone call (press the [CALL] button), and start a conversation.
   Confirm the other person voice is heard from the speaker.
   Speak toward an external microphone at the following condition, and confirm the other party hears its voice (An external microphone is connected).
   Compare the sound quality with a normal set. Confirm that there is no big difference.
8. Turn on ACC from off, and confirm whether this set connects Bluetooth with the cellular phone again.

Note 2: Depending on the cellular phone, it might not reconnect automatically when ACC is turned on.

7. Bluetooth Audio Function Check

Note 1: Depending on the connecting BT Audio device, track information (e.g. track name, playback time) can be on display.
If the device doesn't support AVRCP1.3, or, if AVRCP1.3 feature of the device has not been validated with WX-GT90BT/GT-90BTE/GT99BT, the track information won't be shown.
Even if there is no track information on display during playback of an AVRCP1.3 device, it is not a failure of WX-GT90BT/GT-90BTE/GT99BT.

1. Connect the Bluetooth audio device (or cellular phone with Bluetooth audio function) with this unit, and confirm the "Audio Streaming" icon ( ) lights.
2. Playback Bluetooth audio. Confirm the sound is emitted from this unit when this unit is switched to "Bluetooth Audio" source.
3. Confirm whether Bluetooth audio can be controlled by operating this unit (the [SEEK+ ▶▶| ▶▶], [◀◀ |◀◀ SEEK–] and [PAUSE 6] buttons operation).

Note 2: Varies depending on the connected Bluetooth audio device.

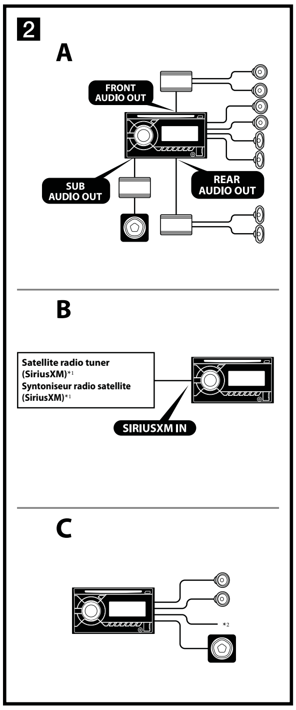
8. What to Do after Checking

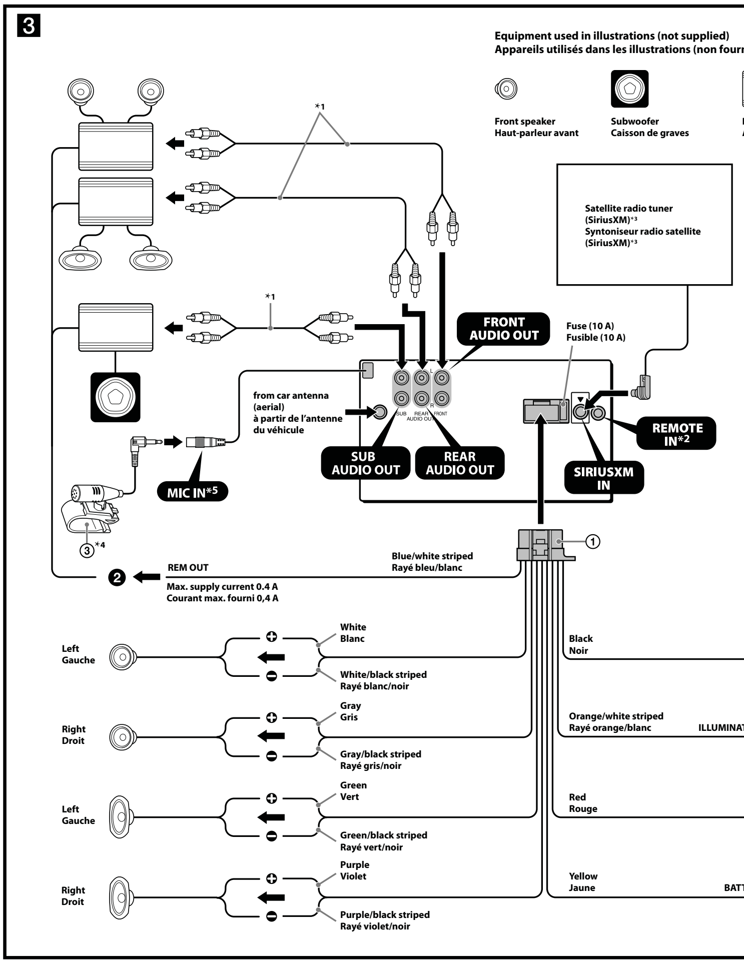
- After checking, select "BT INIT" from the menu list of this unit to execute initialization.
  (Connected device information is deleted)

SECTION 2
GENERAL

This section is extracted from instruction manual.

(US and Canadian models)





*1 RCA pin cord (not supplied).
*2 Depending on the type of car, use an adaptor for a wired remote control (not supplied).
*3 not supplied
*4 For details on installing the microphone, see "Installing the microphone (6)" on the reverse side.
*5 Whether in use or not, route the microphone input cord such that it does not interfere with driving. Secure the cord with a clamp, etc., if it is installed around your feet.

*1 Cordon à broche RCA (non fourni).
*2 Selon le type de voiture, il pourrait être nécessaire d'utiliser une télécommande câblée (non fournie).
*3 non fourni
*4 Pour les détails sur l'installation du microphone, référez-vous à « Installation du microphone (6) » au verso.
*5 Qu'il soit en usage ou non, acheminez le cordon d'entrée du microphone de telle sorte qu'il ne gêne pas votre conduite. Fixez le cordon à l'aide d'une attache, etc., s'il est installé autour de vos pieds.

English

Cautions

Be sure to install this unit in the dashboard of the car as the rear side of the unit becomes hot during use.

- This unit is designed for negative ground (earth) 12 V DC operation only.
- Do not get the leads under a screw, or caught in moving parts (e.g. seat railing).
- Before making connections, turn the car ignition off to avoid short circuits.
- Connect the **yellow** and **red** power supply leads only after all other leads have been connected.
- **Run all ground (earth) leads to a common ground (earth) point.**
- Be sure to insulate any loose unconnected leads with electrical tape for safety.
- The use of optical instruments with this product will increase eye hazard.

Notes on the power supply lead (yellow)
- When connecting this unit in combination with other stereo components, the connected car circuit's rating must be higher than the sum of each component's fuse.
- When no car circuits are rated high enough, connect the unit directly to the battery.

Connection example (2)

Subwoofer Direct Connection (2-C)
For details on the setting for the connection, see the supplied Operating Instruction.

*1 *not supplied (**2-B**)*
*2 *Do not connect a speaker in this connection (**2-C**).*

Notes
- *Be sure to connect the ground (earth) lead before connecting the amplifier.*
- *The alarm will only sound if the built-in amplifier is used.*

Connection diagram (3)

1 To a metal surface of the car
First connect the black ground (earth) lead, then connect the yellow and red power supply leads.

2 To the power antenna (aerial) control lead or power supply lead of antenna (aerial) booster
Notes
- *It is not necessary to connect this lead if there is no power antenna (aerial) or antenna (aerial) booster, or with a manually-operated telescopic antenna (aerial).*
- *When your car has a built-in FM/AM antenna (aerial) in the rear/side glass, see "Notes on the control and power supply leads."*

To AMP REMOTE IN of an optional power amplifier
This connection is only for amplifiers and a power antenna (aerial). Connecting any other system may damage the unit.

3 To a car's illumination signal
Be sure to connect the black ground (earth) lead to a metal surface of the car first.

4 To the +12 V power terminal which is energized in the accessory position of the ignition switch
Notes
- *If there is no accessory position, connect to the +12 V power (battery) terminal which is energized at all times.*
  Be sure to connect the black ground (earth) lead to a metal surface of the car first.
- *When your car has a built-in FM/AM antenna (aerial) in the rear/side glass, see "Notes on the control and power supply leads."*

5 To the +12 V power terminal which is energized at all times
Be sure to connect the black ground (earth) lead to a metal surface of the car first.

Notes on the control and power supply leads
- *REM OUT lead (blue/white striped) supplies +12 V DC when you turn on the unit.*
- *When your car has built-in FM/AM antenna (aerial) in the rear/side glass, connect REM OUT lead (blue/white striped) or the accessory power supply lead (red) to the power terminal of the existing antenna (aerial) booster. For details, consult your dealer.*
- *A power antenna (aerial) without a relay box cannot be used with this unit.*

Memory hold connection
When the yellow power supply lead is connected, power will always be supplied to the memory circuit even when the ignition switch is turned off.

Notes on speaker connection
- *Before connecting the speakers, turn the unit off.*
- *Use speakers with an impedance of 4 to 8 ohms, and with adequate power handling capacities to avoid its damage.*
- *Do not connect the speaker terminals to the car chassis, or connect the terminals of the right speakers with those of the left speaker.*
- *Do not connect the ground (earth) lead of this unit to the negative (–) terminal of the speaker.*
- *Do not attempt to connect the speakers in parallel.*
- *Connect only passive speakers. Connecting active speakers (with built-in amplifiers) to the speaker terminals may damage the unit.*
- *To avoid a malfunction, do not use the built-in speaker leads installed in your car if the unit shares a common negative (–) lead for the right and left speakers.*
- *Do not connect the unit's speaker leads to each other.*

Note on connection
If speaker and amplifier are not connected correctly, "FAILURE" appears in the display. In this case, make sure the speaker and amplifier are connected correctly.

Français

Précautions

Installez cet appareil sur le tableau de bord de la voiture, car l'arrière de l'appareil chauffe en cours d'utilisation.

- Cet appareil est exclusivement conçu pour fonctionner sur une tension de 12 V CC avec masse négative.
- Évitez de fixer des vis sur les câbles ou de coincer ceux-ci dans des pièces mobiles (par exemple, armature de siège).
- Avant d'effectuer les raccordements, coupez le moteur pour éviter un court-circuit.
- Raccordez les câbles d'alimentation **jaune** et **rouge** seulement après avoir terminé tous les autres raccordements.
- **Rassemblez tous les câbles de mise à la masse en un point de masse commun.**
- Pour des raisons de sécurité, veillez à isoler avec du ruban isolant tout câble libre non raccordé.
- L'utilisation d'instruments optiques avec ce produit augmente les risques pour les yeux.

Remarques sur le câble d'alimentation (jaune)
- Lorsque cet appareil est raccordé à d'autres éléments stéréo, la valeur nominale du circuit de la voiture raccordé doit être supérieure à la somme des fusibles de chaque élément.
- Si aucun circuit de la voiture n'est assez puissant, raccordez directement l'appareil à la batterie.

Exemple de raccordement (2)

Raccordement direct d'un caisson de graves (2-C)
Pour plus de détails sur le réglage pour le raccordement, reportez-vous au mode d'emploi fourni.

*1 *non fourni (**2-B**)*
*2 *Ne raccordez pas un haut-parleur avec cette connexion (**2-C**).*

Remarques
- *Raccordez d'abord le câble de mise à la masse avant de raccorder l'amplificateur.*
- *L'alarme est émise uniquement lorsque l'amplificateur intégré est utilisé.*

Schéma de raccordement (3)

1 À un point métallique de la voiture
Branchez d'abord le câble de mise à la masse noir et, ensuite, les câbles d'alimentation jaune et rouge.

2 Au câble de commande d'antenne électrique ou au câble d'alimentation de l'amplificateur d'antenne
Remarques
- *Il n'est pas nécessaire de raccorder ce câble s'il n'y a pas d'antenne électrique ni d'amplificateur d'antenne, ou avec une antenne télescopique manuelle.*
- *Si votre voiture est équipée d'une antenne FM/AM intégrée dans la vitre arrière/latérale, voir « Remarques sur les câbles de commande et d'alimentation ».*

Au niveau de AMP REMOTE IN de l'amplificateur de puissance en option
Ce raccordement s'applique uniquement aux amplificateurs et à une antenne électrique. Le branchement de tout autre système risque d'endommager l'appareil.

3 Vers le connecteur du signal d'éclairage de la voiture
Raccordez d'abord le câble de mise à la masse noir à un point métallique du véhicule.

4 À la borne d'alimentation +12 V qui est alimentée quand la clé de contact est sur la position accessoires
Remarques
- *S'il n'y a pas de position accessoires, raccordez la borne d'alimentation (batterie) +12 V qui est alimentée en permanence.*
  Raccordez d'abord le câble de mise à la masse noir à un point métallique du véhicule.
- *Si votre voiture est équipée d'une antenne FM/AM intégrée dans la vitre arrière/latérale, voir « Remarques sur les câbles de commande et d'alimentation ».*

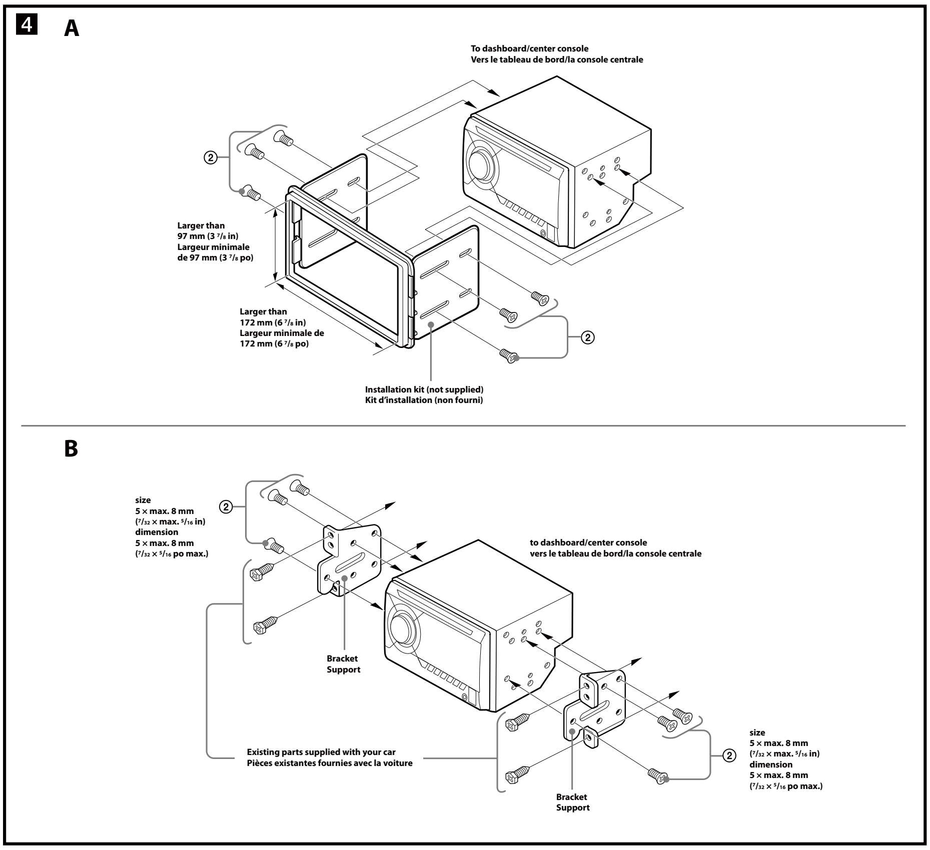
5 À la borne d'alimentation +12 V qui est alimentée en permanence
Raccordez d'abord le câble de mise à la masse noir à un point métallique du véhicule.

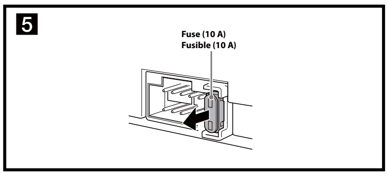
Remarques sur les câbles de commande et d'alimentation
- *Le câble REM OUT (rayé bleu/blanc) fournit une alimentation de +12 V CC lorsque vous mettez l'appareil en marche.*
- *Lorsque votre voiture est équipée d'une antenne FM/AM intégrée dans la vitre arrière/latérale, raccordez le câble REM OUT (rayé bleu/blanc) ou le câble d'alimentation des accessoires (rouge) à la borne d'alimentation de l'amplificateur d'antenne existant. Pour plus de détails, consultez votre détaillant.*
- *Une antenne électrique sans boîtier de relais ne peut pas être utilisée avec cet appareil.*

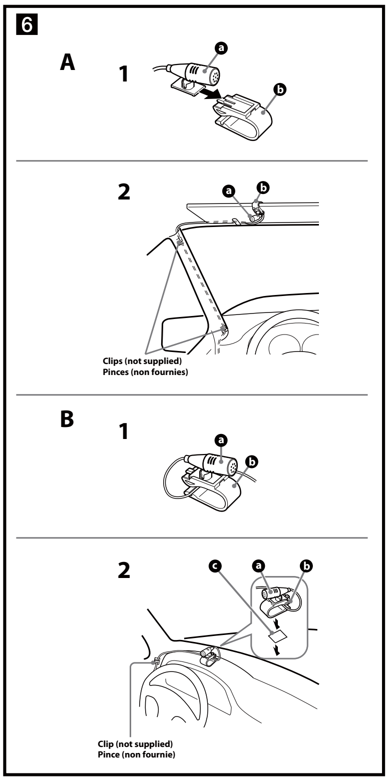
Raccordement pour la conservation de la mémoire
Lorsque le câble d'alimentation jaune est raccordé, le circuit de la mémoire est alimenté en permanence même si la clé de contact est sur la position d'arrêt.

Remarques sur le raccordement des haut-parleurs
- *Avant de raccorder les haut-parleurs, éteignez l'appareil.*
- *Utilisez des haut-parleurs ayant une impédance de 4 à 8 ohms avec une capacité électrique adéquate pour éviter de les endommager.*
- *Ne raccordez pas les bornes du système de haut-parleurs au châssis de la voiture et ne raccordez pas les bornes du haut-parleur droit à celles du haut-parleur gauche.*
- *Ne raccordez pas le câble de mise à la masse de cet appareil à la borne négative (–) du haut-parleur.*
- *N'essayez pas de raccorder les haut-parleurs en parallèle.*
- *Raccordez uniquement des haut-parleurs passifs. Le raccordement de haut-parleurs actifs (avec amplificateurs intégrés) aux bornes des haut-parleurs peut endommager l'appareil.*
- *Pour éviter tout problème de fonctionnement, n'utilisez pas les câbles des haut-parleurs intégrés installés dans votre voiture si l'appareil possède un câble négatif commun (–) pour les haut-parleurs droit et gauche.*
- *Ne raccordez pas entre eux les cables des haut-parleurs de l'appareil.*

Remarque sur le raccordement
Si le haut-parleur et l'amplificateur ne sont pas raccordés correctement, le message « FAILURE » s'affiche. Dans ce cas, assurez-vous que les haut-parleurs et l'amplificateur sont bien raccordés.







English

Precautions

- Choose the installation location carefully so that the unit will not interfere with normal driving operations.
- Avoid installing the unit in areas subject to dust, dirt, excessive vibration, or high temperatures, such as in direct sunlight or near heater ducts.
- Use only the supplied mounting hardware for a safe and secure installation.

Mounting angle adjustment

Adjust the mounting angle to less than 45°.

Mounting the unit (4)

4-A Mounting the unit with an installation kit (not supplied)

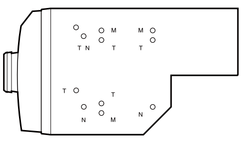
You can use a commercially available double DIN installation kit. Choose an installation kit with the following panel frame size.
Larger than 172 × 97 mm (6 7/8 × 3 7/8 in) (w/h), with an inner corner radius of less than 0.5 mm (1/32 in).

Note
Be sure to use the supplied screws ②.

4-B Mounting the unit in a Japanese car

You may not be able to install this unit in some makes of Japanese cars. In such a case, consult your Sony dealer.

When mounting this unit to the preinstalled brackets of your car, use the supplied screws ② in the appropriate screw holes, based on your car: T for TOYOTA, M for MITSUBISHI and N for NISSAN.



Note
To prevent malfunction, install only with the supplied screws ②.

Warning if your car's ignition has no ACC position

Be sure to set the Auto Off function. For details, see the supplied Operating Instructions.
The unit will shut off completely and automatically in the set time after the unit is turned off, which prevents battery drain.
If you do not set the Auto Off function, press and hold (SOURCE/OFF) until the display disappears each time you turn the ignition off.

Fuse replacement (5)

When replacing the fuse, be sure to use one matching the amperage rating stated on the original fuse. If the fuse blows, check the power connection and replace the fuse. If the fuse blows again after replacement, there may be an internal malfunction. In such a case, consult your nearest Sony dealer.

Installing the microphone (6)

To capture your voice during handsfree calling, you need to install the microphone (supplied).

Cautions
- Keep the microphone away from extremely high temperatures and humidity.
- It is extremely dangerous if the cord becomes wound around the steering column or gearstick. Be sure to keep it and other parts from obstructing your driving.
- If airbags or any other shock-absorbing equipment is in your car, contact the store where you purchased this unit, or the car dealer, before installation.

6-A Installing on the sun visor

1. **Install the microphone ⓐ on the clip ⓑ.**
2. **Install the clip ⓑ on the sun visor.**
3. **Install clips (not supplied) and adjust the length and position of the cord so that it does not obstruct your driving.**

6-B Installing on the dashboard

1. **Install the microphone ⓐ on the clip ⓑ, then place the cord along the groove of the clip ⓑ.**
2. **Attach the clip ⓑ to the dashboard with the double-sided tape ⓒ.**
3. **Install a clip (not supplied) and adjust the length and position of the cord so that it does not obstruct your driving.**

Notes
- *Before attaching the double-sided tape ⓒ, clean the surface of the dashboard with a dry cloth.*
- *Adjust the microphone angle to the proper position.*
- *The microphone ⓐ can be installed without using the clip ⓑ. In this case, directly attach the microphone to the dashboard with the double-sided tape ⓒ. Keep the unused clip ⓑ for future use.*

Français

Précautions

- Choisissez soigneusement l'emplacement d'installation pour que l'appareil ne gêne pas le conducteur pendant la conduite.
- Évitez d'installer l'appareil dans un endroit exposé à la poussière, à la saleté, à des vibrations excessives ou à des températures élevées comme en plein soleil ou à proximité de conduits de chauffage.
- Pour garantir un montage sûr, n'utilisez que le matériel fourni.

Réglage de l'angle de montage

Réglez l'inclinaison à un angle inférieur à 45°.

Montage de l'appareil (4)

4-A Montage de l'appareil à l'aide d'un kit d'installation (non fourni)

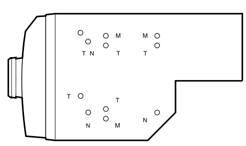
Vous pouvez utiliser un kit d'installation DIN double disponible sur le marché. Choisissez un kit d'installation dont la taille du cadre de la façade est la suivante :
Largeur minimale de 172 × 97 mm (6 7/8 × 3 7/8 po) (l/h), avec un rayon d'arrondi interne inférieur à 0,5 mm (1/32 po).

Remarque
Veillez à utiliser exclusivement les vis fournies ②.

4-B Montage de l'appareil dans une voiture japonaise

Cet appareil ne peut pas être installé dans certaines voitures japonaises. Consultez, dans ce cas, votre détaillant Sony.

Lors de la fixation de cet appareil dans les supports pré-installés du véhicule, vissez les vis ② fournies dans les trous appropriés selon le modèle de véhicule : T pour TOYOTA, M pour MITSUBISHI et N pour NISSAN.



Remarque
Pour éviter tout problème de fonctionnement, utilisez uniquement les vis ② fournies pour le montage.

Avertissement si le contact de votre véhicule ne comporte pas de position ACC

Veillez à régler la fonction Auto Off. Pour obtenir davantage d'informations, reportez-vous au mode d'emploi fourni.
L'appareil s'éteint complètement et automatiquement après le laps de temps choisi une fois l'appareil arrêté afin d'éviter que la batterie ne se décharge.
Si vous ne réglez pas la fonction Auto Off, appuyez sur la touche (SOURCE/OFF) et maintenez-la enfoncée jusqu'à ce que l'affichage disparaisse à chaque fois que vous coupez le contact.

Remplacement du fusible (5)

Lorsque vous remplacez le fusible, veillez à utiliser un fusible dont l'intensité, en ampères, correspond à la valeur indiquée sur le fusible usagé. Si le fusible grille, vérifiez le branchement de l'alimentation et remplacez le fusible. Si le nouveau fusible grille également, il est possible que l'appareil soit défectueux. Dans ce cas, consultez votre détaillant Sony le plus proche.

Installation du microphone (6)

Pour capturer votre voix au cours d'un appel en mains libres, vous devez installer le microphone (fourni).

Avertissements
- Éloignez le microphone de l'humidité et des températures extrêmement élevées.
- Il est extrêmement dangereux que le cordon s'enroule autour de la colonne de direction ou du levier de vitesses. Assurez-vous d'éviter que le cordon et les autres parties puissent encombrer votre conduite.
- Si des coussins gonflables ou tout équipement antichoc se trouvent dans votre voiture, communiquez avec le magasin où vous avez acheté cet appareil, ou le concessionnaire, avant l'installation.

6-A Installation sur le pare-soleil

1. **Installez le microphone ⓐ sur la pince ⓑ.**
2. **Installez la pince ⓑ sur le pare-soleil.**
3. **Installez les pinces (non fournies) et réglez la longueur et la position du cordon de façon à ne pas encombrer votre conduite.**

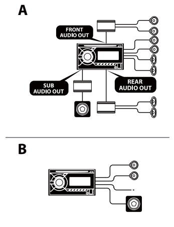
6-B Installation sur le tableau de bord

1. **Installez le microphone ⓐ sur la pince ⓑ, puis placez le cordon le long de la rainure de la pince ⓑ.**
2. **Fixez la pince ⓑ au tableau de bord à l'aide d'un ruban adhésif à double face ⓒ.**
3. **Installez la pince (non fournie) et réglez la longueur et la position du cordon de façon à ne pas encombrer votre conduite.**

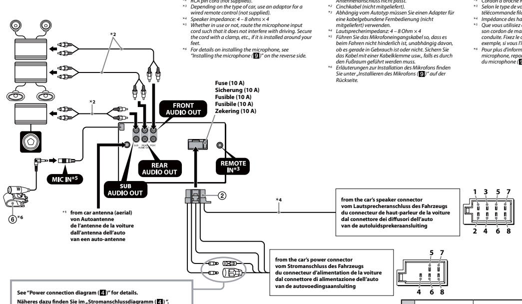
Remarques
- *Avant de fixer le ruban adhésif à double face ⓒ, nettoyez la surface du tableau de bord avec un tissu sec.*
- *Réglez l'angle du microphone à la bonne position.*
- *Le microphone ⓐ peut être installé sans utiliser la pince ⓑ. Le cas échéant, fixez directement le microphone au tableau de bord à l'aide d'un ruban adhésif à double face ⓒ. Gardez la pince inutilisée ⓑ pour utilisation ultérieure.*

(AEP, Russian and UK models)

2



3



See "Power connection diagram (4)" for details.
Näheres dazu finden Sie im „Stromanschlussdiagramm (4)".
Voir le « Schéma de raccordement d'alimentation (4) » pour plus de détails.
Per dettagli, consultare il "Diagramma dei collegamenti di alimentazione (4)".
Zie "Voedingsaansluitschema (4)" voor meer details.

*1 Depending on the type of car, use an adaptor (not supplied) if the antenna connector does not fit.
*2 RCA pin cord (not supplied).
*3 Depending on the type of car, use an adaptor for a wired remote control (not supplied).
*4 Speaker impedance: 4 – 8 ohms × 4
*5 Whether in use or not, route the microphone input cord such that it does not interfere with driving. Secure the cord with a clamp, etc., if it is installed around your feet.
*6 For details on installing the microphone, see "Installing the microphone (9)" on the reverse side.

*1 Abhängig vom Autotyp müssen Sie einen Adapter (nicht mitgeliefert) verwenden, wenn der Antennenanschluss nicht passt.
*2 Cinchkabel (nicht mitgeliefert).
*3 Abhängig vom Autotyp müssen Sie einen Adapter für eine kabelgebundene Fernbedienung (nicht mitgeliefert) verwenden.
*4 Lautsprecherimpedanz: 4 – 8 Ohm × 4
*5 Führen Sie das Mikrofoneingangskabel so, dass es beim Fahren nicht hinderlich ist, unabhängig davon, ob es gerade in Gebrauch ist oder nicht. Sichern Sie das Kabel mit einer Kabelklemme usw., falls es durch den Fußraum geführt werden muss.
*6 Erläuterungen zur Installation des Mikrofons finden Sie unter „Installieren des Mikrofons (9)" auf der Rückseite.

*1 Selon le type de voiture, utilisez un adaptateur (non fourni) si le connecteur de l'antenne ne convient pas.
*2 Cordon à broche RCA (non fourni).
*3 Selon le type de voiture, utilisez un adaptateur pour télécommande filaire (non fournie).
*4 Impédance des haut-parleurs : 4 – 8 ohms × 4
*5 Que vous utilisiez ou non le microphone, acheminez son cordon de manière à ce qu'il ne gêne pas la conduite. Fixez le cordon à l'aide d'une attache, par exemple, si vous l'installez à proximité des pieds.
*6 Pour plus d'informations sur l'installation du microphone, reportez-vous à la section « Installation du microphone (9) » au verso.

*1 In base al tipo di automobile, utilizzare un adattatore (non in dotazione) nel caso in cui il connettore dell'antenna non sia adatto.
*2 Cavo a piedini RCA (non in dotazione).
*3 In base al tipo di automobile, utilizzare un adattatore per un telecomando cablato (non in dotazione).
*4 Impedenza diffusori: 4 – 8 ohm × 4
*5 Indipendentemente dal fatto che venga utilizzato o meno, sistemare il cavo di ingresso del microfono in modo che non interferisca con la guida. Se il cavo è installato nella parte dell'abitacolo riservato ai piedi, fissarlo con un fermacavo o simili.
*6 Per ulteriori informazioni sull'installazione del microfono, consultare "Installazione del microfono (9)" sul lato opposto.

*1 Afhankelijk van het soort wagen gebruikt u een adapter (niet bijgeleverd) als de antenneconnector niet past.
*2 Tulpstekkersnoer (niet bijgeleverd).
*3 Afhankelijk van het soort wagen gebruikt u een adapter voor een bedrade afstandsbediening (niet bijgeleverd).
*4 Luidsprekerimpedantie: 4 – 8 ohm × 4
*5 Zorg ervoor dat de microfooningangskabel u niet kan hinderen tijdens het rijden. Bevestig de kabel met een klem enz. als deze in de buurt van uw voeten geïnstalleerd is.
*6 Meer informatie over de installatie van de microfoon vindt u onder "De microfoon installeren (9)" op de keerzijde.

1	Purple Violett Violet Viola Paars	+	Speaker, Rear, Right Lautsprecher hinten rechts Haut-parleur, arrière, droit Diffusore, posteriore, destro Luidspreker, achter, rechts
2		–	Speaker, Rear, Right Lautsprecher hinten rechts Haut-parleur, arrière, droit Diffusore, posteriore, destro Luidspreker, achter, rechts
3	Gray Grau Gris Grigio Grijs	+	Speaker, Front, Right Lautsprecher vorne rechts Haut-parleur, avant, droit Diffusore, anteriore, destro Luidspreker, voor, rechts
4		–	Speaker, Front, Right Lautsprecher vorne rechts Haut-parleur, avant, droit Diffusore, anteriore, destro Luidspreker, voor, rechts

5	White Weiß Blanc Bianco Wit	+	Speaker, Front, Left Lautsprecher vorne links Haut-parleur, avant, gauche Diffusore, anteriore, sinistro Luidspreker, voor, links
6		–	Speaker, Front, Left Lautsprecher vorne links Haut-parleur, avant, gauche Diffusore, anteriore, sinistro Luidspreker, voor, links
7	Green Grün Vert Verde Groen	+	Speaker, Rear, Left Lautsprecher hinten links Haut-parleur, arrière, gauche Diffusore, posteriore, sinistro Luidspreker, achter, links
8		–	Speaker, Rear, Left Lautsprecher hinten links Haut-parleur, arrière, gauche Diffusore, posteriore, sinistro Luidspreker, achter, links

Negative polarity positions 2, 4, 6, and 8 have striped leads.
An den negativ gepolten Positionen 2, 4, 6 und 8 befinden sich gestreifte Adern.
Les positions de polarité négative 2, 4, 6 et 8 sont dotées de cordons rayés.
Le posizioni a polarità negativa 2, 4, 6 e 8 hanno cavi rigati.
De posities voor negatieve polariteit (2, 4, 6 en 8) hebben gestreepte kabels.

4	Yellow Gelb Jaune Giallo Geel	continuous power supply permanente Stromversorgung alimentation continue alimentazione continua continue voeding
5	Blue/white striped Blauweiß gestreift Rayé bleu/blanc Rigato blu e bianco Blauw/wit gestreept	power antenna (aerial) /power amplifier control (REM OUT) Steueranschluss für Motorantenne/Endverstärker (REM OUT) commande de l'antenne électrique/amplificateur de puissance (REM OUT) antenna elettrica/controllo dell'amplificatore di potenza (REM OUT) elektrische antenne / versterker (REM OUT)
6	Orange/White Orangeweiß gestreift Rayé orange/blanc Arancione/bianco Oranje/wit	switched illumination power supply geschaltete Beleuchtungsstromversorgung alimentation de l'éclairage commuté alimentazione illuminazione commutata geschakelde voeding voor verlichting

7	Red Rot Rouge Rosso Rood	switched power supply geschaltete Stromversorgung alimentation commutée alimentazione commutata geschakelde voeding
8	Black Schwarz Noir Nero Zwart	ground (earth) Masse masse terra aarding

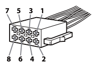
Positions 1, 2 and 3 do not have pins.
An Position 1, 2 und 3 befinden sich keine Stifte.
Les positions 1, 2 et 3 ne comportent pas de broches.
Le posizioni 1, 2 e 3 non hanno piedini.
De posities 1, 2 en 3 hebben geen pins.

Equipment used in illustrations (not supplied)
In Abbildungen dargestellte Geräte (nicht mitgeliefert)
Appareils utilisés dans les illustrations (non fournis)
Apparecchiatura utilizzata nelle illustrazioni (non in dotazione)
Apparatuur gebruikt in de afbeeldingen (niet bijgeleverd)

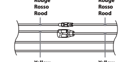
Front speaker Frontlautsprecher Haut-parleur avant Diffusore anteriore Voorluidspreker	Subwoofer Tiefsttonlautsprecher Caisson de graves Subwoofer Subwoofer	Power amplifier Endverstärker Amplificateur de puissance Amplificatore di potenza Eindversterker	Rear speaker Hecklautsprecher Haut-parleur arrière Diffusore posteriore Achterluidspreker

4

Auxiliary power connector
Hilfsstromanschluss
Connecteur d'alimentation auxiliaire
Connettore di alimentazione ausiliaria
Hulpvoedingsaansluiting

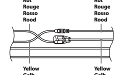


1



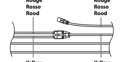
4	Yellow Gelb Jaune Giallo Geel	continuous power supply permanente Stromversorgung alimentation continue alimentazione continua continue voeding
7	Red Rot Rouge Rosso Rood	switched power supply geschaltete Stromversorgung alimentation commutée alimentazione commutata geschakelde voeding

2



4	Yellow Gelb Jaune Giallo Geel	switched power supply geschaltete Stromversorgung alimentation commutée alimentazione commutata geschakelde voeding
7	Red Rot Rouge Rosso Rood	continuous power supply permanente Stromversorgung alimentation continue alimentazione continua continue voeding

3



the car without ACC position
Fahrzeug ohne Zubehörposition (ACC oder I)
Véhicule sans position ACC
Auto priva della posizione ACC
Auto zonder ACC-positie

English

Cautions

Be sure to install this unit in the dashboard of the car as the rear side of the unit becomes hot during use.

- This unit is designed for negative ground (earth) 12 V DC operation only.
- Do not get the leads under a screw, or caught in moving parts (e.g. seat railing).
- Before making connections, turn the car ignition off to avoid short circuits.
- Connect the power supply lead ② to the unit and speakers before connecting it to the auxiliary power connector.
- **Run all ground (earth) leads to a common ground (earth) point.**
- Be sure to insulate any loose unconnected leads with electrical tape for safety.

Notes on the power supply lead (yellow)
- When connecting this unit in combination with other stereo components, the connected car circuit's rating must be higher than the sum of each component's fuse.
- When no car circuits are rated high enough, connect the unit directly to the battery.

Connection example (2)

Subwoofer Direct Connection (2-B)
For details on the setting for the connection, see the supplied Operating Instruction.

* *Do not connect a speaker in this connection.*

Notes
- *Be sure to connect the ground (earth) lead before connecting the amplifier.*
- *The alarm will only sound if the built-in amplifier is used.*

Connection diagram (3)

Warning
If you have a power antenna (aerial) without a relay box, connecting this unit with the supplied power supply lead ② may damage the antenna (aerial).

Notes on the control and power supply leads
- *REM OUT lead (blue/white striped) supplies +12 V DC when you turn on the unit.*
- *When using an optional power amplifier, connect REM OUT lead (blue/white striped) or the accessory power supply lead (red) to its AMP REMOTE IN.*
- *When your car has built-in FM/MW/LW antenna (aerial) in the rear/side glass, connect REM OUT lead (blue/white striped) or the accessory power supply lead (red) to the power terminal of the existing antenna (aerial) booster. For details, consult your dealer.*
- *A power antenna (aerial) without a relay box cannot be used with this unit.*

Memory hold connection
When the yellow power supply lead is connected, power will always be supplied to the memory circuit even when the ignition switch is turned off.

Notes on speaker connection
- *Before connecting the speakers, turn the unit off.*
- *Use speakers with an impedance of 4 to 8 ohms, and with adequate power handling capacities to avoid its damage.*
- *Do not connect the speaker terminals to the car chassis, or connect the terminals of the right speakers with those of the left speaker.*
- *Do not connect the ground (earth) lead of this unit to the negative (–) terminal of the speaker.*
- *Do not attempt to connect the speakers in parallel.*
- *Connect only passive speakers. Connecting active speakers (with built-in amplifiers) to the speaker terminals may damage the unit.*
- *To avoid a malfunction, do not use the built-in speaker leads installed in your car if the unit shares a common negative (–) lead for the right and left speakers.*
- *Do not connect the unit's speaker leads to each other.*

Note on connection
If speaker and amplifier are not connected correctly, "FAILURE" appears in the display. In this case, make sure the speaker and amplifier are connected correctly.

Power connection diagram (4)

Auxiliary power connector may vary depending on the car. Check your car's auxiliary power connector diagram to make sure the connections match correctly. There are three basic types (**4-1**, **4-2**, **4-3**). You may need to switch the positions of the red and yellow leads in the car stereo's power supply lead.
After matching the connections and switched power supply leads correctly, connect the unit to the car's power supply. If you have any questions and problems connecting your unit that are not covered in this manual, please consult the car dealer.

Deutsch

Warnhinweise

Installieren Sie das Gerät unbedingt im Armaturenbrett des Fahrzeugs, denn die Rückseite des Geräts erwärmt sich bei Betrieb.

- Dieses Gerät ist ausschließlich für den Betrieb bei 12 V Gleichstrom (negative Erdung) bestimmt.
- Achten Sie darauf, dass die Kabel nicht unter einer Schraube oder zwischen beweglichen Teilen wie z. B. in einer Sitzschiene eingeklemmt werden.
- Schalten Sie, bevor Sie irgendwelche Anschlüsse vornehmen, die Zündung des Fahrzeugs aus, um Kurzschlüsse zu vermeiden.
- Verbinden Sie das Stromversorgungskabel ② mit dem Gerät und den Lautsprechern, bevor Sie es mit dem Hilfsstromanschluss verbinden.
- **Schließen Sie alle Erdungskabel an einen gemeinsamen Massepunkt an.**
- Aus Sicherheitsgründen müssen alle losen, nicht angeschlossenen Drähte mit Isolierband abgeklebt werden.

Hinweise zum Stromversorgungskabel (gelb)
- Wenn Sie dieses Gerät zusammen mit anderen Stereokomponenten anschließen, muss der Autostromkreis, an den die Geräte angeschlossen sind, eine höhere Leistung aufweisen als die Summe der Sicherungen der einzelnen Komponenten.
- Wenn kein Autostromkreis eine so hohe Leistung aufweist, schließen Sie das Gerät direkt an die Batterie an.

Anschlussbeispiel (2)

Direktverbindung mit Tiefsttonlautsprecher (2-B)
Einzelheiten zur Einstellung für die Verbindung finden Sie in der mitgelieferten Bedienungsanleitung.

* *Schließen Sie an diesen Anschluss keinen Lautsprecher an.*

Hinweise
- *Schließen Sie unbedingt zuerst das Massekabel an, bevor Sie den Verstärker anschließen.*
- *Der Warnton wird nur ausgegeben, wenn der integrierte Verstärker verwendet wird.*

Anschlussdiagramm (3)

Warnung
Wenn Sie eine Motorantenne ohne Relaiskästchen verwenden, kann durch Anschließen dieses Geräts mit dem mitgelieferten Stromversorgungskabel ② die Antenne beschädigt werden.

Hinweise zu den Steuer- und Stromversorgungsleitungen
- *Die REM OUT-Leitung (blauweiß gestreift) liefert +12 V Gleichstrom, wenn Sie das Gerät einschalten.*
- *Wenn Sie einen gesondert erhältlichen Endverstärker verwenden, schließen Sie die REM OUT-Leitung (blauweiß gestreift) oder die Stromversorgungsleitung für Zubehörgeräte (rot) an AMP REMOTE IN an.*
- *Wenn das Fahrzeug mit einer in der Heck-/Seitenfensterscheibe integrierten FM (UKW)/MW/LW-Antenne ausgestattet ist, schließen Sie die REM OUT-Leitung (blauweiß gestreift) oder die Stromversorgungsleitung für Zubehörgeräte (rot) an den Stromversorgungsanschluss des vorhandenen Antennenverstärkers an. Einzelheiten dazu erhalten Sie bei Ihrem Händler.*
- *Es kann nur eine Motorantenne mit Relaiskästchen angeschlossen werden.*

Stromversorgung des Speichers
Wenn die gelbe Stromversorgungsleitung angeschlossen ist, wird der Speicher stets (auch bei ausgeschalteter Zündung) mit Strom versorgt.

Hinweise zum Lautsprecheranschluss
- *Schalten Sie das Gerät aus, bevor Sie die Lautsprecher anschließen.*
- *Verwenden Sie Lautsprecher mit einer Impedanz zwischen 4 und 8 Ohm und ausreichender Belastbarkeit. Ansonsten können die Lautsprecher beschädigt werden.*
- *Verbinden Sie die Lautsprecheranschlüsse nicht mit dem Wagenchassis und verbinden Sie auch nicht die Anschlüsse des rechten mit denen des linken Lautsprechers.*
- *Verbinden Sie die Masseleitung dieses Geräts nicht mit dem negativen (–) Lautsprecheranschluss.*
- *Versuchen Sie nicht, Lautsprecher parallel anzuschließen.*
- *An die Lautsprecheranschlüsse dieses Geräts dürfen nur Passivlautsprecher angeschlossen werden. Schließen Sie keine Aktivlautsprecher (Lautsprecher mit eingebauten Verstärkern) an, da das Gerät sonst beschädigt werden könnte.*
- *Um Fehlfunktionen zu vermeiden, verwenden Sie nicht die im Fahrzeug installierten, integrierten Lautsprecherleitungen, wenn am Ende eine gemeinsame negative (–) Leitung für den rechten und den linken Lautsprecher verwendet wird.*
- *Verbinden Sie nicht die Lautsprecherkabel des Geräts miteinander.*

Hinweis zum Anschließen
Wenn Lautsprecher und Verstärker nicht richtig angeschlossen sind, erscheint „FAILURE" im Display. Vergewissern Sie sich in diesem Fall, dass Lautsprecher und Verstärker richtig angeschlossen sind.

Stromanschlussdiagramm (4)

Der Hilfsstromanschluss kann je nach Fahrzeugtyp unterschiedlich sein. Sehen Sie im Hilfsstromanschlussdiagramm für Ihr Fahrzeug nach, wie die Verbindung ordnungsgemäß vorgenommen werden muss. Es gibt, wie unten abgebildet, drei grundlegende Typen (**4-1**, **4-2**, **4-3**). Sie müssen möglicherweise die rote und gelbe Leitung des Stromversorgungskabels der Autostereoanlage vertauschen.
Stellen Sie die Anschlüsse her, schließen Sie die geschalteten Stromversorgungsleitungen richtig an und verbinden Sie dann das Gerät mit der Stromversorgung Ihres Fahrzeugs. Wenn beim Anschließen des Geräts Fragen oder Probleme auftreten, die in dieser Anleitung nicht erläutert werden, wenden Sie sich bitte an den Autohändler.

Français

Précautions

Installez cet appareil sur le tableau de bord de la voiture, car l'arrière de l'appareil chauffe en cours d'utilisation.

- Cet appareil est conçu pour fonctionner uniquement sur un courant continu de 12 V avec masse négative.
- Evitez de coincer les câbles sous des vis ou dans des pièces mobiles (par exemple, armature de siège).
- Avant d'effectuer des raccordements, coupez le moteur pour éviter les courts-circuits.
- Branchez le câble d'alimention ② sur l'appareil et les haut-parleurs avant de le brancher sur le connecteur d'alimentation auxiliaire.
- **Rassemblez tous les câbles de mise à la masse en un point de masse commun.**
- Veillez à isoler tout câble lâche non raccordé avec du ruban isolant.

Remarques sur le câble d'alimentation (jaune)
- Lorsque cet appareil est raccordé à d'autres équipements stéréo, la valeur nominale du circuit raccordé du véhicule doit être supérieure à la somme des fusibles de chaque élément.
- Si aucun circuit de la voiture n'est assez puissant, raccordez directement l'appareil à la batterie.

Exemple de raccordement (2)

Connexion directe du caisson de graves (2-B)
Pour plus d'informations sur l'établissement de la connexion, reportez-vous au mode d'emploi fourni.

* *Ne raccordez pas de haut-parleur à cette connexion.*

Remarques
- *Raccordez d'abord le câble de mise à la masse avant de connecter l'amplificateur.*
- *L'alarme est émise uniquement lorsque l'amplificateur intégré est utilisé.*

Schéma de raccordement (3)

Avertissement
Si vous disposez d'une antenne électrique sans boîtier de relais, le branchement de cet appareil au moyen du cordon d'alimentation fourni ② risque d'endommager l'antenne.

Remarques sur les câbles de commande et d'alimentation
- *Fil REM OUT (rayé bleu/blanc) fournit une tension de +12 V CC lors de la mise sous tension de l'appareil.*
- *Si vous utilisez un amplificateur de puissance en option, raccordez le fil REM OUT (rayé bleu/blanc) ou le fil d'alimentation des accessoires (rouge) à son AMP REMOTE IN.*
- *Si votre véhicule est équipé d'une antenne FM/MW (PO)/LW (GO) intégrée dans la vitre arrière/latérale, raccordez le fil REM OUT (rayé bleu/blanc) ou le fil d'alimentation des accessoires (rouge) à la borne d'alimentation de l'amplificateur d'antenne existant. Pour plus d'informations, consultez votre revendeur.*
- *Une antenne électrique sans boîtier de relais ne peut pas être utilisée avec cet appareil.*

Raccordement pour la conservation de la mémoire
Lorsque le câble d'alimentation jaune est raccordé, le circuit de la mémoire est alimenté en permanence même si la clé de contact est en position d'arrêt.

Remarques sur le raccordement des haut-parleurs
- *Avant de raccorder les haut-parleurs, mettre l'appareil hors tension.*
- *Utiliser des haut-parleurs ayant une impédance de 4 à 8 ohms et une capacité adéquate sous peine de les endommager.*
- *Ne pas raccorder les bornes du système de haut-parleurs au châssis de la voiture et ne pas connecter les bornes des haut-parleurs droit à celles des haut-parleurs gauche.*
- *Ne pas raccorder le câble de mise à la masse de cet appareil à la borne négative (–) du haut-parleur.*
- *Ne pas tenter de raccorder les haut-parleurs en parallèle.*
- *Connecter uniquement des haut-parleurs passifs. La connexion de haut-parleurs actifs (avec des amplificateurs intégrés) aux bornes des haut-parleurs pourrait endommager l'appareil.*
- *Pour éviter tout problème de fonctionnement, n'utilisez pas les câbles des haut-parleurs intégrés installés dans votre voiture si l'appareil dispose d'un câble négatif (–) commun pour les haut-parleurs droit et gauche.*
- *Ne raccordez pas entre eux les cordons des haut-parleurs de l'appareil.*

Remarque sur le raccordement
Si les haut-parleurs et l'amplificateur ne sont pas raccordés correctement, le message « FAILURE » s'affiche. Dans ce cas, assurez-vous que les haut-parleurs et l'amplificateur sont raccordés correctement.

Schéma de raccordement d'alimentation (4)

Le connecteur d'alimentation auxiliaire peut varier suivant le type de voiture. Vérifiez le schéma du connecteur d'alimentation auxiliaire de votre voiture pour vous assurer que les connexions correspondent. Il en existe trois types de base (**4-1**, **4-2**, **4-3**). Il se peut que vous deviez commuter la position des fils rouge et jaune du câble d'alimentation de l'autoradio.
Après avoir établi les connexions et commuté correctement les câbles d'alimentation, raccordez l'appareil à l'alimentation de la voiture. Si vous avez des questions ou des difficultés à propos de cet appareil qui ne sont pas abordées dans le présent mode d'emploi, consultez votre concessionnaire automobile.

Italiano

Attenzione

Assicurarsi di installare l'apparecchio nel cruscotto dell'auto, poiché la parte posteriore dell'apparecchio stesso si surriscalda durante l'uso.

- Questo apparecchio è stato progettato per l'uso solo a 12 V CC con massa negativa.
- Evitare che i cavi rimangano bloccati da una vite o incastrati nelle parti mobili (ad esempio nelle guide scorrevoli dei sedili).
- Prima di effettuare i collegamenti, spegnere il motore dell'automobile onde evitare di causare cortocircuiti.
- Collegare il cavo di alimentazione ② all'apparecchio e ai diffusori prima di collegarlo al connettore di alimentazione ausiliaria.
- **Portare tutti i cavi di messa a terra a un punto di massa comune.**
- Per sicurezza, assicurarsi di isolare qualsiasi cavo non collegato utilizzando del nastro adesivo.

Note sul cavo di alimentazione (giallo)
- Se questo apparecchio viene collegato in combinazione con altri componenti stereo, la potenza nominale dei circuiti dell'automobile deve essere superiore a quella prodotta dalla somma dei fusibili di ciascun componente.
- Se la potenza nominale dei circuiti dell'automobile non è sufficiente, collegare l'apparecchio direttamente alla batteria.

Esempio di collegamento (2)

Connessione diretta al subwoofer (2-B)
Per informazioni sull'impostazione della connessione, vedere le istruzioni per l'uso in dotazione.

* *Non collegare un diffusore in questa connessione.*

Note
- *Assicurarsi di collegare il cavo di terra prima di collegare l'apparecchio all'amplificatore.*
- *L'allarme viene emesso solo se è in uso l'amplificatore incorporato.*

Schema di collegamento (3)

Avvertenza
Quando si collega l'apparecchio con il cavo di alimentazione in dotazione ②, si potrebbe danneggiare l'antenna elettrica se questa non dispone di scatola a relè.

Note sui cavi di controllo e di alimentazione
- *Il cavo REM OUT (rigato blu e bianco) fornisce alimentazione da +12 V CC all'accensione dell'apparecchio.*
- *Quando si utilizza un amplificatore di potenza opzionale, collegare il cavo REM OUT (rigato blu e bianco) o il cavo di alimentazione accessoria (rosso) al rispettivo AMP REMOTE IN.*
- *Se l'automobile è dotata di antenna FM/MW/LW incorporata nel vetro posteriore/laterale, collegare il cavo REM OUT (rigato blu e bianco) o il cavo di alimentazione accessoria (rosso) al terminale di alimentazione del preamplificatore dell'antenna esistente. Per ulteriori informazioni, consultare il rivenditore.*
- *Non è possibile usare un'antenna elettrica senza scatola a relè con questo apparecchio.*

Collegamento per la conservazione della memoria
Quando il cavo di ingresso alimentazione giallo è collegato, viene sempre fornita alimentazione al circuito di memoria anche quando l'interruttore di accensione è spento.

Note sul collegamento dei diffusori
- *Prima di collegare i diffusori spegnere l'apparecchio.*
- *Usare diffusori di impedenza compresa tra 4 e 8 ohm e con capacità di potenza adeguata, altrimenti i diffusori potrebbero venire danneggiati.*
- *Non collegare i terminali del sistema diffusori al telaio dell'auto e non collegare i terminali del diffusore destro a quelli del diffusore sinistro.*
- *Non collegare il cavo di terra di questo apparecchio al terminale negativo (–) del diffusore.*
- *Non collegare i diffusori in parallelo.*
- *Assicurarsi di collegare soltanto diffusori passivi, poiché il collegamento di diffusori attivi, dotati di amplificatori incorporati, ai terminali dei diffusori potrebbe danneggiare l'apparecchio.*
- *Per evitare problemi di funzionamento, non utilizzare i cavi dei diffusori incorporati installati nell'automobile se l'apparecchio condivide un cavo comune negativo (–) per i diffusori destro e sinistro.*
- *Non collegare fra loro i cavi dei diffusori dell'apparecchio.*

Nota sui collegamenti
Se l'amplificatore e il diffusore non sono collegati correttamente, "FAILURE" viene visualizzato nel display. In tal caso, accertarsi che l'amplificatore e il diffusore siano collegati correttamente.

Diagramma dei collegamenti di alimentazione (4)

Il connettore di alimentazione ausiliaria può variare a seconda della macchina. Controllare il diagramma del connettore di alimentazione ausiliaria della macchina per essere sicuri che i collegamenti corrispondano correttamente. Vi sono tre tipi di base (**4-1**, **4-2**, **4-3**). Potrebbe essere necessario cambiare le posizioni dei fili rosso e giallo nel cavo di alimentazione dello stereo della macchina.
Dopo aver fatto corrispondere i collegamenti e aver commutato i cavi di alimentazione, collegare l'apparecchio all'alimentazione della macchina. Se si hanno domande o se sorgono problemi che non sono stati trattati nel manuale nel collegare l'apparecchio, contattare l'autoconcessionario.

Nederlands

Let op

Installeer dit apparaat in het dashboard van de auto omdat de achterkant van het apparaat tijdens gebruik heet kan worden.

- Dit apparaat is ontworpen voor gebruik op een auto-accu van 12 V gelijkstroom, negatieve aarde.
- Zorg ervoor dat de draden niet onder een schroef of tussen bewegende onderdelen (bv. rail van de autostoel) terechtkomen.
- Voordat u de aansluitingen maakt, moet u het contact uitzetten om kortsluiting te vermijden.
- Sluit de voedingskabel ② aan op het apparaat en de luidsprekers voordat u de kabel aansluit op de hulpvoedingsaansluiting.
- **Sluit alle aardingskabels op een gemeenschappelijk aardpunt aan.**
- Voorzie niet-aangesloten kabels om veiligheidsredenen altijd van isolatietape.

Opmerkingen bij de voedingskabel (geel)
- Wanneer u dit apparaat aansluit samen met andere componenten, moet het vermogen van de aangesloten autostroomkring groter zijn dan de som van de zekeringen van elke component afzonderlijk.
- Wanneer het vermogen ontoereikend is, moet u het apparaat rechtstreeks aansluiten op de accu.

Voorbeeldaansluitingen (2)

Rechtstreekse subwooferverbinding (2-B)
Raadpleeg de bijgeleverde gebruiksaanwijzing voor meer informatie over het doorvoeren van de verbinding.

* *Sluit geen luidspreker aan in deze verbinding.*

Opmerkingen
- *Sluit eerst de aarddraad aan voordat u de versterker aansluit.*
- *U hoort de pieptoon alleen als de ingebouwde versterker wordt gebruikt.*

Aansluitschema (3)

Waarschuwing
Indien u een elektrische antenne hebt zonder relaiskast, kan het aansluiten van dit apparaat met de bijgeleverde voedingskabel ② de antenne beschadigen.

Opmerkingen over de bedienings- en voedingskabels
- *De REM OUT-kabel (blauw/wit gestreept) levert +12 V DC als u het apparaat inschakelt.*
- *Als u een optionele versterker gebruikt, sluit u de REM OUT-kabel (blauw/wit gestreept) of de voedingskabel voor accessoires (rood) aan op de AMP REMOTE IN-aansluiting van de versterker.*
- *Als uw auto uitgerust is met een FM/MW/LW-antenne in de achter- of zijruit, sluit u de REM OUT-kabel (blauw/wit gestreept) of de voedingskabel voor accessoires (rood) aan op de voedingsaansluiting van de bestaande antenneversterker. Contacteer uw handelaar voor meer informatie.*
- *Met dit apparaat is het niet mogelijk een elektrische antenne zonder relaiskast te gebruiken.*

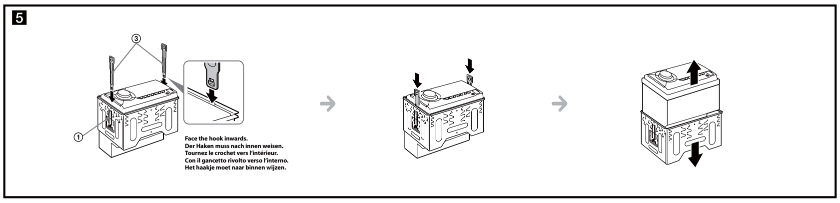
Instandhouden van het geheugen
Zolang de gele voedingskabel is aangesloten, blijft de stroomvoorziening van het geheugen intact, ook wanneer het contact van de auto wordt uitgeschakeld.

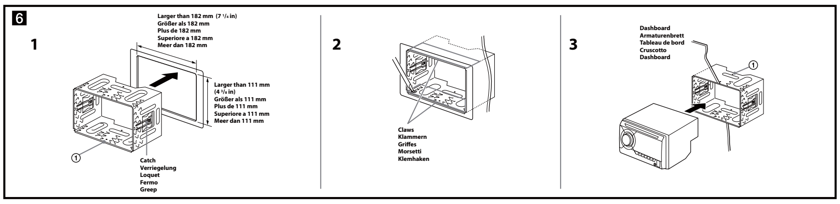
Opmerkingen betreffende het aansluiten van de luidsprekers
- *Zorg dat het apparaat is uitgeschakeld alvorens de luidsprekers aan te sluiten.*
- *Gebruik luidsprekers met een impedantie van 4 tot 8 ohm en let op dat die het vermogen van de versterker kunnen verwerken. Als u dit niet doet, kunnen de luidsprekers ernstig beschadigd raken.*
- *Verbind in geen geval de aansluitingen van de luidsprekers met het chassis van de auto en sluit de aansluitingen van de rechter- en linkerluidspreker niet op elkaar aan.*
- *Verbind de aarddraad van dit apparaat niet met de negatieve (–) aansluiting van de luidspreker.*
- *Probeer nooit de luidsprekers parallel aan te sluiten.*
- *Sluit geen actieve luidsprekers (met ingebouwde versterkers) aan op de luidsprekeraansluiting van dit apparaat. Dit zal leiden tot beschadiging van de actieve luidsprekers. Sluit dus altijd uitsluitend luidsprekers zonder ingebouwde versterker aan.*
- *Om defecten te vermijden mag u de bestaande luidsprekerbedrading in uw auto niet gebruiken wanneer er een gemeenschappelijke negatieve (–) draad is voor de rechter- en linkerluidsprekers.*
- *Verbind de luidsprekerdraden niet met elkaar.*

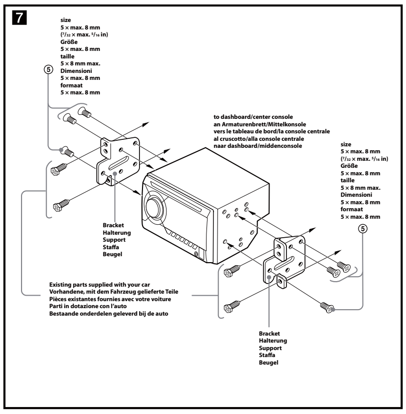
Opmerking over aansluiten
Als de luidspreker en versterker niet correct zijn aangesloten, wordt "FAILURE" in het display weergegeven. In dit geval moet u zorgen dat de luidspreker en versterker correct zijn aangesloten.

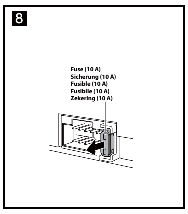
Voedingsaansluitschema (4)

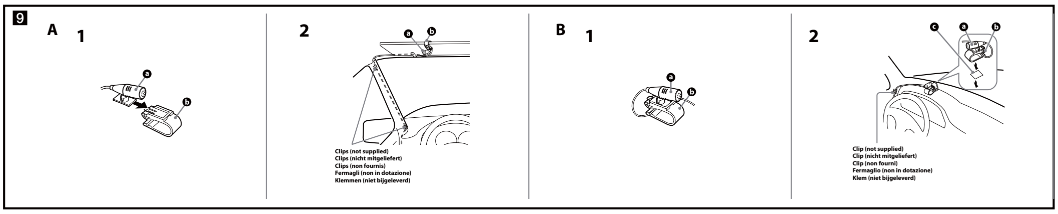
De hulpvoedingsaansluiting kan verschillen afhankelijk van de auto. Controleer het hulpvoedingsaansluitschema dat bij dit apparaat wordt geleverd om te zien of de aansluitingen kloppen. Er zijn drie basistypes (**4-1**, **4-2**, **4-3**). Het is mogelijk dat u de posities van de rode en gele kabels in de voedingskabel van het autoaudiosysteem moet omwisselen.
Als de aansluitingen en geschakelde voedingskabels kloppen, sluit u het apparaat aan op de voeding van de auto. Indien u nog vragen of problemen hebt in verband met het aansluiten van het apparaat die niet in deze handleiding worden behandeld, raadpleeg dan de autodealer.











English

Precautions

- Choose the installation location carefully so that the unit will not interfere with normal driving operations.
- Avoid installing the unit in areas subject to dust, dirt, excessive vibration, or high temperature, such as in direct sunlight or near heater ducts.
- Use only the supplied mounting hardware for a safe and secure installation.

Mounting angle adjustment

Adjust the mounting angle to less than 45°.

Removing the bracket (5)

Before installing the unit, remove the bracket ① from the unit.

1 Insert both release keys ③ together between the unit and the bracket ① until they click.

2 Pull down the bracket ①, then pull up the unit to separate.

Mounting example (6)

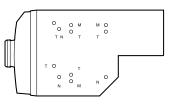
Installation in the dashboard

Notes
- *Before installing, make sure that the catches on both sides of the bracket ① are bent inwards 3.5 mm (5/32 in). If the catches are straight or bent outwards, the unit will not be installed securely and may spring out (6-1).*
- *Bend these claws outward for a tight fit, if necessary (6-2).*
- *Mount the unit onto the supplied bracket ① (6-3).*

Mounting the unit in a Japanese car (7)

You may not be able to install this unit in some makes of Japanese cars. In such a case, consult your Sony dealer.

When mounting this unit to the preinstalled brackets of your car, use the supplied screws ⑤ in the appropriate screw holes, based on your car: T for TOYOTA, M for MITSUBISHI and N for NISSAN.



Note
To prevent malfunction, install only with the supplied screws ⑤.

Warning if your car's ignition has no ACC position

Be sure to set the Auto Off function. For details, see the supplied Operating Instructions.
The unit will shut off completely and automatically in the set time after the unit is turned off, which prevents battery drain.
If you do not set the Auto Off function, press and hold (SOURCE/OFF) until the display disappears each time you turn the ignition off.

Fuse replacement (8)

When replacing the fuse, be sure to use one matching the amperage rating stated on the original fuse. If the fuse blows, check the power connection and replace the fuse. If the fuse blows again after replacement, there may be an internal malfunction. In such a case, consult your nearest Sony dealer.

Installing the microphone (9)

To capture your voice during handsfree calling, you need to install the microphone (supplied).

Cautions
- Keep the microphone away from extremely high temperatures and humidity.
- It is extremely dangerous if the cord becomes wound around the steering column or gearstick. Be sure to keep it and other parts from obstructing your driving.
- If airbags or any other shock-absorbing equipment is in your car, contact the store where you purchased this unit, or the car dealer, before installation.

9-A Installing on the sun visor

1 Install the microphone ⓐ on the clip ⓑ.

2 Install the clip ⓑ on the sun visor.

3 Install clips (not supplied) and adjust the length and position of the cord so that it does not obstruct your driving.

9-B Installing on the dashboard

1 Install the microphone ⓐ on the clip ⓑ, then place the cord along the groove of the clip ⓑ.

2 Attach the clip ⓑ to the dashboard with the double-sided tape ⓒ.

3 Install a clip (not supplied) and adjust the length and position of the cord so that it does not obstruct your driving.

Notes
- *Before attaching the double-sided tape ⓒ, clean the surface of the dashboard with a dry cloth.*
- *Adjust the microphone angle to the proper position.*
- *The microphone ⓐ can be installed without using the clip ⓑ. In this case, directly attach the microphone to the dashboard with the double-sided tape ⓒ. Keep the unused clip ⓑ for future use.*

Deutsch

Sicherheitshinweise

- Wählen Sie den Einbauort sorgfältig so aus, dass das Gerät beim Fahren nicht hinderlich ist.
- Bauen Sie das Gerät so ein, dass es keinen hohen Temperaturen (keinem direkten Sonnenlicht, keiner Warmluft von der Heizung), keinem Staub, keinem Schmutz und keinen starken Vibrationen ausgesetzt ist.
- Für eine sichere Befestigung verwenden Sie stets die mitgelieferten Montageteile.

Hinweis zum Montagewinkel

Das Gerät sollte in einem Winkel von weniger als 45° montiert werden.

Abnehmen der Halterung (5)

Nehmen Sie vor dem Installieren des Geräts die Halterung ① vom Gerät ab.

1 Führen Sie beide Löseschlüssel ③ zwischen dem Gerät und der Halterung ① ein, bis sie mit einem Klicken einrasten.

2 Ziehen Sie die Halterung ① nach unten und das Gerät nach oben, um die beiden zu trennen.

Montagebeispiel (6)

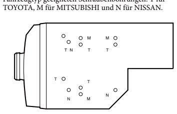
Installation im Armaturenbrett

Hinweise
- *Vergewissern Sie sich vor dem Installieren, dass die Verriegelungen an beiden Seiten der Halterung ① um 3,5 mm nach innen gebogen sind. Wenn die Verriegelungen gerade oder nach außen gebogen sind, lässt sich das Gerät nicht sicher installieren und kann herausspringen (6-1).*
- *Falls erforderlich, biegen Sie diese Klammern für einen sicheren Halt nach außen (6-2).*
- *Montieren Sie das Gerät an der mitgelieferten Halterung ① (6-3).*

Montieren des Geräts in einem japanischen Fahrzeug (7)

Dieses Gerät lässt sich möglicherweise in einigen Modellen japanischer Fahrzeughersteller nicht einbauen. Wenden Sie sich in einem solchen Fall an Ihren Sony-Händler.

Wenn Sie dieses Gerät an der eingebauten Halterung des Fahrzeugs montieren, befestigen Sie es mit den mitgelieferten Schrauben ⑤ in den für den jeweiligen Fahrzeugtyp geeigneten Schraubenbohrungen: T für TOYOTA, M für MITSUBISHI und N für NISSAN.



Hinweis
Um Fehlfunktionen zu vermeiden, verwenden Sie zum Einbauen des Geräts nur die mitgelieferten Schrauben ⑤.

Warnhinweis, wenn die Zündung Ihres Fahrzeugs nicht über eine Zubehörposition (ACC oder I) verfügt

Aktivieren Sie unbedingt die Abschaltautomatik. Näheres dazu finden Sie in der mitgelieferten Bedienungsanleitung. Nach dem Ausschalten wird das Gerät dann nach der voreingestellten Zeit automatisch vollständig abgeschaltet, so dass der Autobatterie kein Strom mehr entzogen wird.
Wenn Sie die Abschaltautomatik nicht aktivieren, müssen Sie jedes Mal, wenn Sie die Zündung ausschalten, die Taste (SOURCE/OFF) gedrückt halten, bis die Anzeige ausgeblendet wird.

Austauschen der Sicherung (8)

Wenn Sie eine Sicherung austauschen, achten Sie darauf, eine Ersatzsicherung mit dem gleichen Ampere-Wert wie die Originalsicherung zu verwenden. Dieser ist auf der Originalsicherung angegeben. Wenn die Sicherung durchbrennt, überprüfen Sie den Stromanschluss und tauschen die Sicherung aus. Brennt die neue Sicherung ebenfalls durch, kann eine interne Fehlfunktion vorliegen. Wenden Sie sich in einem solchen Fall an Ihren Sony-Händler.

Installieren des Mikrofons (9)

Damit bei Freisprechanrufen Ihre Stimme übertragen werden kann, müssen Sie das Mikrofon (mitgeliefert) installieren.

Sicherheitshinweise
- Schützen Sie das Mikrofon vor extrem hohen Temperaturen und Feuchtigkeit.
- Es ist sehr gefährlich, wenn sich das Kabel um die Lenksäule oder den Schalthebel wickelt. Achten Sie unbedingt darauf, dass das Kabel und andere Teile beim Fahren nicht hinderlich sind.
- Wenn Ihr Auto mit Airbags oder anderen Aufprallschutzsystemen ausgestattet ist, wenden Sie sich vor der Installation an den Händler, bei dem Sie dieses Gerät erworben haben, oder an den Autohändler.

9-A Befestigung an der Sonnenblende

1 Befestigen Sie das Mikrofon ⓐ am Clip ⓑ.

2 Bringen Sie den Clip ⓑ an der Sonnenblende an.

3 Bringen Sie Clips (nicht mitgeliefert) an und wählen Sie die Länge und Verlegung des Kabels so, dass es beim Fahren nicht hinderlich ist.

9-B Befestigung am Armaturenbrett

1 Befestigen Sie das Mikrofon ⓐ am Clip ⓑ und führen Sie das Kabel entlang der Kerbe des Clips ⓑ.

2 Bringen Sie den Clip ⓑ mit dem doppelseitigen Klebeband ⓒ am Armaturenbrett an.

3 Bringen Sie einen Clip (nicht mitgeliefert) an und wählen Sie die Länge und Verlegung des Kabels so, dass es beim Fahren nicht hinderlich ist.

Hinweise
- *Reinigen Sie die Oberfläche des Armaturenbretts mit einem trockenen Tuch, bevor Sie das doppelseitige Klebeband ⓒ anbringen.*
- *Stellen Sie den Mikrofonwinkel nach Bedarf ein.*
- *Das Mikrofon ⓐ kann auch ohne Clip ⓑ befestigt werden. Bringen Sie das Mikrofon in diesem Fall mit dem doppelseitigen Klebeband ⓒ direkt am Armaturenbrett an. Bewahren Sie den nicht verwendeten Clip ⓑ zum späteren Gebrauch auf.*

Français

Précautions

- Choisir soigneusement l'emplacement de l'installation afin que l'appareil ne gêne pas la conduite normale du véhicule.
- Eviter d'installer l'appareil dans un endroit exposé à de la poussière, de la saleté, des vibrations violentes ou à des températures élevées, comme en plein soleil ou à proximité d'un conduit de chauffage.
- Pour garantir un montage sûr, n'utiliser que le matériel fourni.

Réglage de l'angle de montage

Ajuster l'inclinaison à un angle inférieur à 45°.

Retrait du support (5)

Avant d'installer l'appareil, retirez le support ① de l'appareil.

1 Insérez les deux clés de déblocage ③ simultanément entre l'appareil et le support ① jusqu'au déclic indiquant qu'elles sont en place.

2 Tirez le support ① vers le bas, puis tirez l'appareil vers le haut pour les séparer.

Exemple de montage (6)

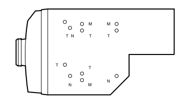
Installation dans le tableau de bord

Remarques
- *Avant l'installation, assurez-vous que les loquets des deux côtés du support ① sont bien pliés de 3,5 mm vers l'intérieur. Si les loquets sont droits ou pliés vers l'extérieur, l'appareil ne peut pas être fixé solidement et peut se détacher (6-1).*
- *Pliez ces griffes vers l'extérieur pour assurer une prise correcte si nécessaire (6-2).*
- *Montez l'appareil sur le support ① fourni (6-3).*

Montage de l'appareil dans une voiture japonaise (7)

Il est possible que vous ne puissiez pas installer cet appareil dans certaines marques de voitures japonaises. Dans ce cas, consultez votre revendeur Sony.

Lorsque vous montez cet appareil sur les supports préinstallés de votre voiture, utilisez les vis fournies ⑤ dans les trous appropriés, selon votre voiture : T pour TOYOTA, M pour MITSUBISHI et N pour NISSAN.



Remarque
Pour éviter tout mauvais fonctionnement, utilisez exclusivement les vis fournies ⑤ pour l'installation.

Avertissement au cas où le contact de votre voiture ne dispose pas d'une position ACC

Veillez à régler la fonction de mise hors tension automatique. Pour obtenir davantage d'informations, reportez-vous au mode d'emploi fourni.
L'appareil s'éteint complètement et automatiquement après le laps de temps choisi une fois qu'il a été mis hors tension afin d'éviter que la batterie ne se décharge.
Si vous ne réglez pas la fonction de mise hors tension automatique, appuyez sur la touche (SOURCE/OFF) et maintenez-la enfoncée jusqu'à ce que l'affichage disparaisse à chaque fois que vous coupez le contact.

Remplacement du fusible (8)

Lorsque vous remplacez le fusible, veillez à utiliser un fusible dont l'intensité, en ampères, correspond à la valeur indiquée sur le fusible usagé. Si le fusible saute, vérifiez le branchement de l'alimentation et remplacez-le. Si le nouveau fusible saute également, il est possible que l'appareil soit défectueux. Dans ce cas, consultez votre revendeur Sony le plus proche.

Installation du microphone (9)

Pour capturer la voix pendant un appel en mains libres, vous devez installer le microphone (fourni).

Avertissements
- Conservez le microphone à l'abri de la chaleur et de l'humidité extrêmement élevées.
- Il est extrêmement dangereux que le cordon s'enroule autour de la colonne de direction ou du changement de vitesse. Veillez à ce que le cordon et les autres pièces n'entravent pas la conduite.
- Si votre véhicule est équipé d'airbags ou d'autres dispositifs d'absorption des chocs, contactez le revendeur de l'appareil ou votre concessionnaire avant de procéder à l'installation.

9-A Installation sur le pare-soleil

1 Fixez le microphone ⓐ au clip ⓑ.

2 Fixez le clip ⓑ au pare-soleil.

3 Fixez des clips (non fournis), puis réglez la longueur et la position du cordon afin qu'il n'entrave pas la conduite.

9-B Installation sur le tableau de bord

1 Fixez le microphone ⓐ au clip ⓑ, puis placez le cordon dans la rainure du clip ⓑ.

2 Fixez le clip ⓑ au tableau de bord avec de l'adhésif double face ⓒ.

3 Fixez un clip (non fourni), puis réglez la longueur et la position du cordon afin qu'il n'entrave pas la conduite.

Remarques
- *Avant de fixer l'adhésif double face ⓒ, nettoyez la surface du tableau de bord avec un chiffon sec.*
- *Réglez l'angle du microphone sur la position correcte.*
- *Le microphone ⓐ peut être installé sans utiliser le clip ⓑ. Dans ce cas, fixez le microphone directement au tableau de bord avec de l'adhésif double face ⓒ. Conservez le clip de réserve ⓑ en vue d'une utilisation ultérieure.*

Italiano

Precauzioni

- Scegliere con attenzione la posizione per l'installazione in modo che l'apparecchio non interferisca con le operazioni di guida del conducente.
- Evitare di installare l'apparecchio dove sia soggetto ad alte temperature, come alla luce solare diretta o al getto di aria calda dell'impianto di riscaldamento, o dove possa essere soggetto a polvere, sporco e vibrazioni eccessive.
- Usare solo il materiale di montaggio in dotazione per un'installazione stabile e sicura.

Regolazione dell'angolo di montaggio

Regolare l'angolo di montaggio in modo che sia inferiore a 45°.

Rimozione della staffa (5)

Prima di installare l'apparecchio, rimuovere la staffa ① dall'apparecchio.

1 Inserire contemporaneamente entrambe le chiavette di rilascio ③ tra l'apparecchio e la staffa ① fino a che non scattano in posizione.

2 Estrarre la staffa ①, quindi sollevare l'apparecchio per rimuoverlo.

Esempio di montaggio (6)

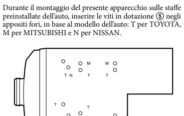
Installazione nel cruscotto

Note
- *Prima di installare l'unità, accertarsi di ripiegare i fermi presenti su entrambi i lati della staffa ① verso l'interno di 3,5 mm. Se i fermi sono diritti o ripiegati verso l'esterno, l'apparecchio non verrà installato in modo sicuro e potrebbe fuoriuscire (6-1).*
- *Piegare verso l'esterno questi morsetti per un'installazione più sicura, se necessario (6-2).*
- *Montare l'apparecchio sulla staffa in dotazione ① (6-3).*

Montaggio dell'apparecchio su un'auto giapponese (7)

Potrebbe risultare impossibile installare questo apparecchio su alcuni tipi di vetture giapponesi. In tal caso, rivolgersi al rivenditore Sony.

Durante il montaggio del presente apparecchio sulle staffe preinstallate dell'auto, inserire le viti in dotazione ⑤ negli appositi fori, in base al modello dell'auto: T per TOYOTA, M per MITSUBISHI e N per NISSAN.



Nota
Per evitare problemi di funzionamento, utilizzare per l'installazione esclusivamente le viti in dotazione ⑤.

Avvertenza relativa all'installazione su un'auto sprovvista della posizione ACC (accessoria) sul blocchetto di accensione

Accertarsi di impostare la funzione di spegnimento automatico. Per ulteriori informazioni, fare riferimento alle istruzioni per l'uso in dotazione.
L'apparecchio si spegne completamente e automaticamente all'ora impostata dopo che è stato disattivato, onde evitare che la batteria si scarichi.
Se la funzione di spegnimento automatico non è stata impostata, ogni volta che il motore viene spento tenere premuto (SOURCE/OFF) finché il display non viene disattivato.

Sostituzione del fusibile (8)

Per la sostituzione del fusibile, assicurarsi di utilizzare un fusibile dello stesso amperaggio di quello indicato sull'originale. Se il fusibile si brucia, controllare i collegamenti dell'alimentazione e sostituire il fusibile. Se dopo la sostituzione il fusibile si brucia di nuovo, è possibile che si tratti di un problema interno. In tal caso, rivolgersi al più vicino rivenditore Sony.

Installazione del microfono (9)

Per catturare la voce durante le chiamate vivavoce, è necessario installare il microfono (in dotazione).

Attenzione
- Non sottoporre il microfono a temperature e umidità eccessivamente elevate.
- Se il cavo rimane avvolto al piantone dello sterzo o alla leva del cambio, possono verificarsi situazioni di estremo pericolo. Accertarsi quindi di posizionare il cavo e altri componenti in modo che non ostruiscano la guida.
- Se nell'auto sono presenti air-bag o altri dispositivi di assorbimento degli urti, prima dell'installazione contattare il negozio in cui è stato acquistato l'apparecchio o l'autoconcessionario.

9-A Installazione sull'aletta parasole

1 Installare il microfono ⓐ sul fermaglio ⓑ.

2 Installare il fermaglio ⓑ sull'aletta parasole.

3 Installare i fermagli (non in dotazione) e regolare la lunghezza e la posizione del cavo in modo che non ostacoli la guida.

9-B Installazione sul cruscotto

1 Installare il microfono ⓐ sul fermaglio ⓑ, quindi inserire il cavo nella scanalatura del fermaglio stesso ⓑ.

2 Applicare il fermaglio ⓑ al cruscotto utilizzando il nastro biadesivo ⓒ.

3 Installare un fermaglio (non in dotazione) e regolare la lunghezza e la posizione del cavo in modo che non ostacoli la guida.

Note
- *Prima di applicare il nastro biadesivo ⓒ, pulire la superficie del cruscotto con un panno asciutto.*
- *Regolare l'angolazione del microfono sulla posizione corretta.*
- *È possibile anche installare il microfono ⓐ senza utilizzare il fermaglio ⓑ. In questo caso, applicare direttamente il microfono al cruscotto utilizzando il nastro biadesivo ⓒ. Conservare il fermaglio inutilizzato ⓑ per usi futuri.*

Nederlands

Voorzorgsmaatregelen

- Kies de installatieplaats zorgvuldig zodat het apparaat de bestuurder niet hindert tijdens het rijden.
- Installeer het apparaat niet op plaatsen waar het blootgesteld wordt aan hoge temperaturen, bv. in direct zonlicht of bij de warme luchtstroom van de autoverwarming, aan sterke trillingen, of waar het in contact komt met veel stof of vuil.
- Gebruik voor het veilig en stevig monteren van het apparaat uitsluitend de bijgeleverde montage-onderdelen.

Maximale montagehoek

Installeer het apparaat nooit in een hoek van meer dan 45° met het horizontale vlak.

De beugel verwijderen (5)

Voordat u het apparaat gaat installeren, moet u de beugel ① verwijderen van het apparaat.

1 Plaats de ontgrendelingssleutels ③ tussen het apparaat en de beugel ① tot deze vastklikken.

2 Trek de beugel ① omlaag en trek het apparaat omhoog om deze van elkaar te scheiden.

Montagevoorbeeld (6)

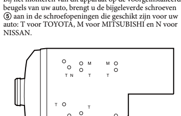
Montage in het dashboard

Opmerkingen
- *Voordat u het apparaat installeert, moet u de grepen aan beide zijden van de beugel ① 3,5 mm naar binnen buigen. Als de grepen recht zijn of naar buiten gebogen, kan het apparaat niet goed worden bevestigd en kan dit losschieten (6-1).*
- *Indien nodig kunt u deze klemhaken ombuigen voor een stevigere bevestiging (6-2).*
- *Monteer het apparaat op de bijgeleverde beugel ① (6-3).*

Het apparaat installeren in een Japanse auto (7)

Het is mogelijk dat u dit apparaat niet kunt installeren in bepaalde Japanse auto's. Contacteer in dat geval uw dichtstbijzijnde Sony-handelaar.

Bij het monteren van dit apparaat op de voorgeïnstalleerde beugels van uw auto, brengt u de bijgeleverde schroeven ⑤ aan in de schroefopeningen die geschikt zijn voor uw auto: T voor TOYOTA, M voor MITSUBISHI en N voor NISSAN.



Opmerking
Om defecten te voorkomen, mag u alleen de bijgeleverde schroeven ⑤ gebruiken.

Waarschuwing als het contactslot van de auto geen ACC-positie heeft

Zorg ervoor dat u de functie voor automatisch uitschakelen instelt. Raadpleeg de bijgeleverde gebruiksaanwijzing voor meer informatie.
Het apparaat wordt na de ingestelde tijd automatisch volledig uitgeschakeld nadat het apparaat is uitgeschakeld. Zo wordt voorkomen dat de accu leegloopt.
Als u de functie voor automatisch uitschakelen niet instelt, moet u (SOURCE/OFF) ingedrukt houden tot het display verdwijnt telkens wanneer u het contact uitschakelt.

Zekering vervangen (8)

Vervang een zekering altijd door een exemplaar van eenzelfde amperage als op de oorspronkelijke zekering wordt vermeld. Als de zekering doorbrandt, moet u de voedingsaansluiting controleren en de zekering vervangen. Brandt de zekering vervolgens nogmaals door, dan kan er sprake zijn van een defect in het apparaat. Raadpleeg in dat geval de Sony-dealer bij u in de buurt.

De microfoon installeren (9)

Om uw stem te kunnen registreren tijdens het handsfree bellen, moet u de microfoon (bijgeleverd) installeren.

Opgelet
- Stel de microfoon niet bloot aan extreem hoge temperaturen of aan een hoge vochtigheidsgraad.
- Het is uiterst gevaarlijk als de kabel rond de stuurkolom of de versnellingspook verstrikt raakt. Zorg ervoor dat de kabel en andere onderdelen u niet kunnen hinderen tijdens het rijden.
- Als uw auto uitgerust is met airbags of andere schokdempende apparatuur, contacteert u de winkel waar u dit apparaat hebt gekocht of uw autodealer voor u het apparaat installeert.

9-A Bevestigen aan de zonneklep

1 Bevestig de microfoon ⓐ aan de klem ⓑ.

2 Bevestig de klem ⓑ aan de zonneklep.

3 Gebruik klemmen (niet bijgeleverd) en pas de lengte en positie van de kabel aan zodat deze u niet hindert tijdens het rijden.

9-B Bevestigen op het dashboard

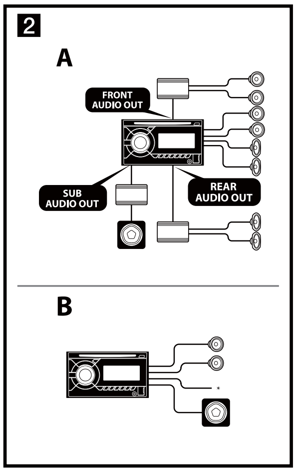
1 Bevestig de microfoon ⓐ aan de klem ⓑ en plaats de kabel in de gleuf in de klem ⓑ.

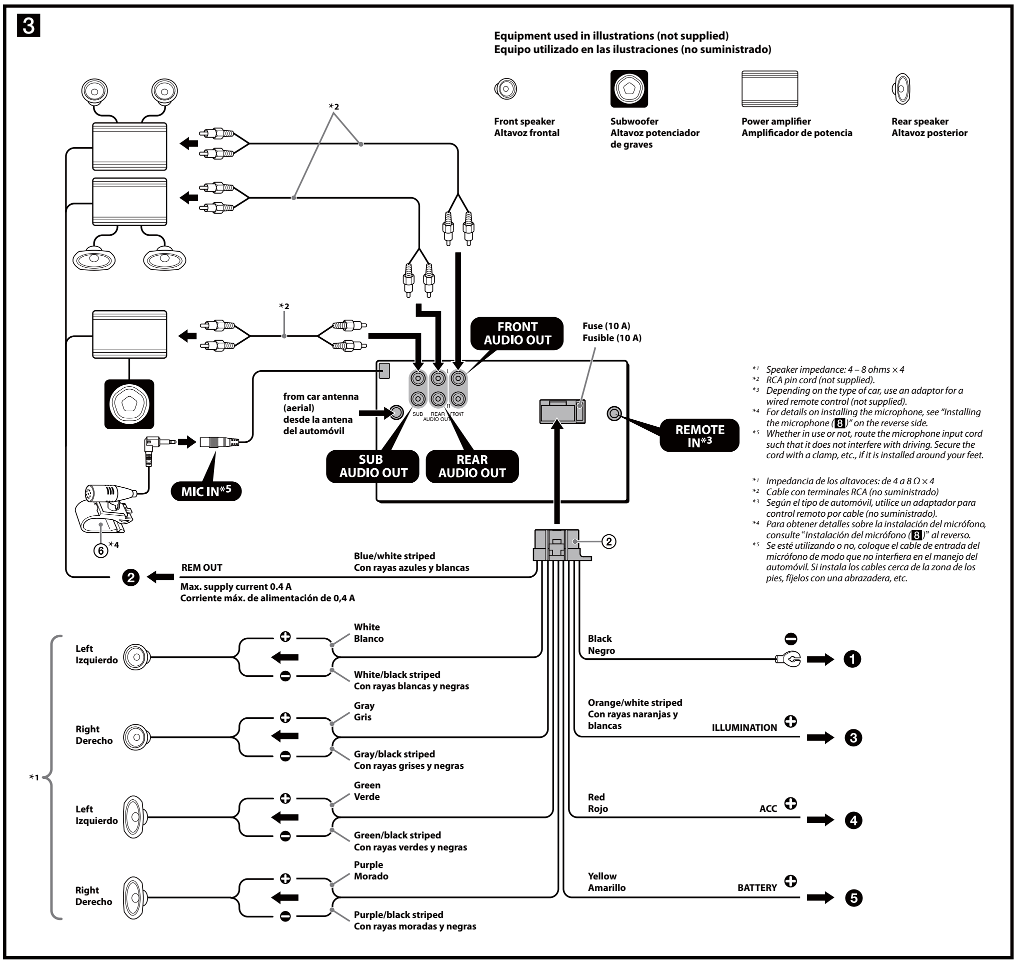
2 Bevestig de klem ⓑ op het dashboard met behulp van de dubbelzijdige kleefband ⓒ.

3 Gebruik een klem (niet bijgeleverd) en pas de lengte en positie van de kabel aan zodat deze u niet hindert tijdens het rijden.

Opmerkingen
- *Voor u de dubbelzijdige kleefband vastmaakt ⓒ, reinigt u het oppervlak van het dashboard met een droge doek.*
- *Breng de microfoon in de juiste hoek.*
- *De microfoon ⓐ kan ook geïnstalleerd worden zonder de klem ⓑ te gebruiken. Bevestig in dit geval de microfoon rechtstreeks op het dashboard met behulp van de dubbelzijdige kleefband ⓒ. Bewaar de ongebruikte klem ⓑ voor toekomstig gebruik.*

(E and Indian models)





English

Cautions

Be sure to install this unit in the dashboard of the car as the rear side of the unit becomes hot during use.

- This unit is designed for negative ground (earth) 12 V DC operation only.
- Do not get the leads under a screw, or caught in moving parts (e.g. seat railing).
- Before making connections, turn the car ignition off to avoid short circuits.
- Connect the **yellow** and **red** power input leads only after all other leads have been connected.
- **Run all ground (earth) leads to a common ground (earth) point.**
- Be sure to insulate any loose unconnected leads with electrical tape for safety.

Notes on the power supply lead (yellow)

- When connecting this unit in combination with other stereo components, the connected car circuit's rating must be higher than the sum of each component's fuse.
- When no car circuits are rated high enough, connect the unit directly to the battery.

Connection example (2)

Subwoofer Direct Connection (2-B)
For details on the setting for the connection, see the supplied Operating Instruction.

* *Do not connect a speaker in this connection.*

Notes

- *Be sure to connect the ground (earth) lead before connecting the amplifier.*
- *The alarm will only sound if the built-in amplifier is used.*

Connection diagram (3)

1 To a metal surface of the car
First connect the black ground (earth) lead, then connect the yellow, and red power supply leads.

2 To the power antenna (aerial) control lead or power supply lead of antenna (aerial) booster

Notes

- *It is not necessary to connect this lead if there is no power antenna (aerial) or antenna (aerial) booster, or with a manually-operated telescopic antenna (aerial).*
- *When your car has a built-in FM/AM antenna (aerial) in the rear/side glass, see "Notes on the control and power supply leads."*

To AMP REMOTE IN of an optional power amplifier
This connection is only for amplifiers and a power antenna (aerial). Connecting any other system may damage the unit.

3 To a car's illumination signal
Be sure to connect the black ground (earth) lead to a metal surface of the car first.

4 To the +12 V power terminal which is energized in the accessory position of the ignition switch

Notes

- *If there is no accessory position, connect to the +12 V power (battery) terminal which is energized at all times.*
  Be sure to connect the black ground (earth) lead to a metal surface of the car first.
- *When your car has a built-in FM/AM antenna (aerial) in the rear/side glass, see "Notes on the control and power supply leads."*

5 To the +12 V power terminal which is energized at all times
Be sure to connect the black ground (earth) lead to a metal surface of the car first.

Notes on the control and power supply leads

- *REM OUT lead (blue/white striped) supplies +12 V DC when you turn on the unit.*
- *When your car has built-in FM/AM antenna (aerial) in the rear/side glass, connect REM OUT lead (blue/white striped) or the accessory power supply lead (red) to the power terminal of the existing antenna (aerial) booster. For details, consult your dealer.*
- *A power antenna (aerial) without a relay box cannot be used with this unit.*

Memory hold connection
When the yellow power input lead is connected, power will always be supplied to the memory circuit even when the ignition switch is turned off.

Notes on speaker connection

- *Before connecting the speakers, turn the unit off.*
- *Use speakers with an impedance of 4 to 8 ohms, and with adequate power handling capacities to avoid its damage.*
- *Do not connect the speaker terminals to the car chassis, or connect the terminals of the right speakers with those of the left speaker.*
- *Do not connect the ground (earth) lead of this unit to the negative (–) terminal of the speaker.*
- *Do not attempt to connect the speakers in parallel.*
- *Connect only passive speakers. Connecting active speakers (with built-in amplifiers) to the speaker terminals may damage the unit.*
- *To avoid a malfunction, do not use the built-in speaker leads installed in your car if the unit shares a common negative (–) lead for the right and left speakers.*
- *Do not connect the unit's speaker leads to each other.*

Note on connection
If speaker and amplifier are not connected correctly, "FAILURE" appears in the display. In this case, make sure the speaker and amplifier are connected correctly.

Español

Precauciones

Asegúrese de instalar la unidad en el tablero del automóvil, ya que la parte posterior de la unidad se calienta durante el uso.

- Esta unidad ha sido diseñada para alimentarse sólo con cc de 12 V de masa negativa.
- No coloque los cables debajo de ningún tornillo, ni los aprisione con partes móviles (p. ej. los rieles del asiento).
- Antes de realizar las conexiones, apague el automóvil para evitar cortocircuitos.
- Conecte los cables de fuente de alimentación **amarillo** y **rojo** solamente después de haber conectado los demás.
- **Conecte todos los cables de conexión a masa a un punto común.**
- Por razones de seguridad, asegúrese de aislar con cinta aislante los cables sueltos que no estén conectados.

Notas sobre el cable de fuente de alimentación (amarillo)

- Cuando conecte esta unidad en combinación con otros componentes estéreo, la capacidad nominal del circuito conectado del automóvil debe ser superior a la suma del fusible de cada componente.
- Si no hay circuitos del automóvil con capacidad nominal suficientemente alta, conecte la unidad directamente a la batería.

Ejemplo de conexiones (2)

Conexión directa de altavoz de subgraves (2-B)
Para obtener más información sobre cómo configurar la conexión, consulte el Manual de instrucciones suministrado.

* *No conecte un altavoz a esta conexión.*

Notas

- *Asegúrese de conectar primero el cable de conexión a masa antes de realizar la conexión del amplificador.*
- *La alarma sonará únicamente si se utiliza el amplificador incorporado.*

Diagrama de conexión (3)

1 A una superficie metálica del automóvil
Conecte primero el cable de conexión a masa negro, y después los cables amarillo y rojo de fuente de alimentación.

2 Al cable de control de la antena motorizada o al cable de fuente de alimentación del amplificador de señal de la antena

Notas

- *Si no se dispone de antena motorizada ni de amplificador de señal de la antena, o se utiliza una antena telescópica accionada manualmente, no será necesario conectar este cable.*
- *Si el automóvil tiene una antena de FM/AM incorporada en el cristal trasero o lateral, consulte "Notas sobre los cables de control y de fuente de alimentación".*

A AMP REMOTE IN de un amplificador de potencia opcional
Esta conexión es sólo para amplificadores y una antena motorizada. La conexión de cualquier otro sistema puede dañar la unidad.

3 A una señal de iluminación del automóvil
Asegúrese de conectar primero el cable de conexión a masa negro a una superficie metálica del automóvil.

4 Al terminal de alimentación de +12 V que recibe energía en la posición de accesorio del interruptor de encendido

Notas

- *Si no hay posición de accesorio, conéctelo al terminal de alimentación (batería) de +12 V que recibe energía sin interrupción.*
  Asegúrese de conectar primero el cable de conexión a masa negro a una superficie metálica del automóvil.
- *Si el automóvil tiene una antena de FM/AM incorporada en el cristal trasero o lateral, consulte "Notas sobre los cables de control y de fuente de alimentación".*

5 Al terminal de alimentación de +12 V que recibe energía sin interrupción
Asegúrese de conectar primero el cable de conexión a masa negro a una superficie metálica del automóvil.

Notas sobre los cables de control y de fuente de alimentación

- *El cable REM OUT (rayado azul y blanco) suministra cc +12 V al encender la unidad.*
- *Si el automóvil dispone de una antena de FM/AM incorporada en el cristal trasero o lateral, conecte el cable REM OUT (rayado azul y blanco) o el cable de fuente de alimentación auxiliar (rojo) al terminal de alimentación del amplificador de señal de la antena existente. Para obtener más detalles, consulte a su distribuidor.*
- *Con esta unidad no es posible utilizar una antena motorizada sin caja de relé.*

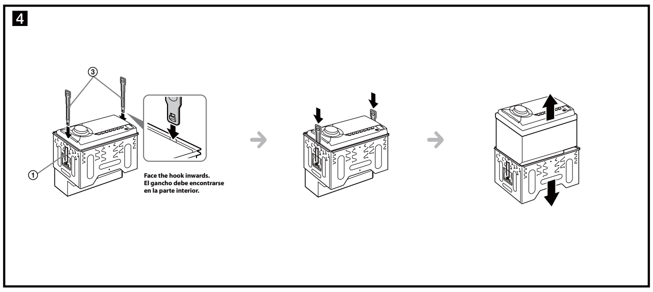
Conexión para protección de la memoria
Si conecta el cable de fuente de alimentación amarillo, el circuito de la memoria recibirá siempre alimentación, aunque apague el interruptor de encendido.

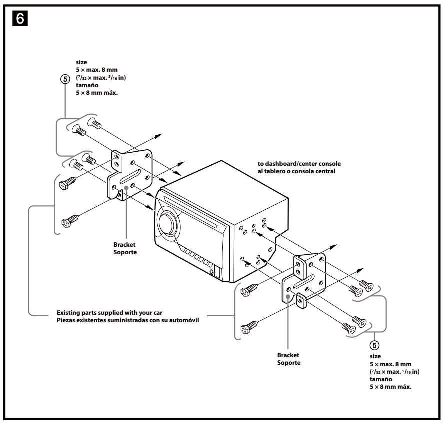
Notas sobre la conexión de los altavoces

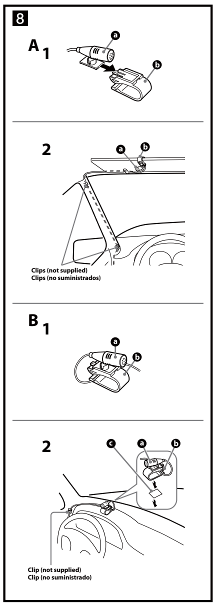
- *Antes de conectar los altavoces, desconecte la alimentación de la unidad.*
- *Utilice altavoces con una impedancia de 4 a 8 Ω con la capacidad de potencia adecuada para evitar que se dañen.*
- *No conecte los terminales de altavoz al chasis del automóvil, ni conecte los terminales del altavoz derecho con los del izquierdo.*
- *No conecte el cable de conexión a masa de esta unidad al terminal negativo (–) del altavoz.*
- *No intente conectar los altavoces en paralelo.*
- *Conecte solamente altavoces pasivos. Si conecta altavoces activos (con amplificadores incorporados) a los terminales de altavoz, puede dañar la unidad.*
- *Para evitar fallas de funcionamiento, no utilice los cables de altavoz incorporados instalados en el automóvil si la unidad comparte un cable negativo común (–) para los altavoces derecho e izquierdo.*
- *No conecte los cables de altavoz de la unidad entre sí.*

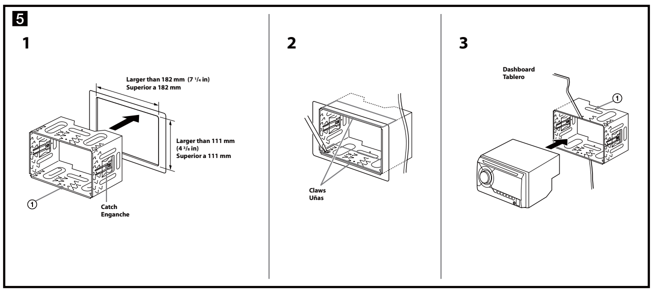
Nota sobre la conexión
Si el altavoz y el amplificador no están conectados correctamente, aparecerá "FAILURE" en la pantalla. Si es así, compruebe la conexión de ambos dispositivos.

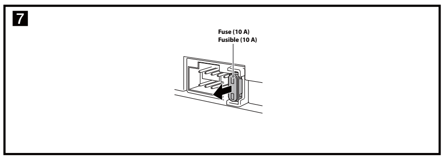
WX-GT90BT/GT90BTE/GT99BT











English

Precautions

- Choose the installation location carefully so that the unit will not interfere with normal driving operations.
- Avoid installing the unit in areas subject to dust, dirt, excessive vibration, or high temperatures, such as in direct sunlight or near heater ducts.
- Use only the supplied mounting hardware for a safe and secure installation.

Mounting angle adjustment

Adjust the mounting angle to less than 45°.

Removing the bracket (4)

Before installing the unit, remove the bracket ① from the unit.

1. **Insert both release keys ③ together between the unit and the bracket ① until they click.**
2. **Pull down the bracket ①, then pull up the unit to separate.**

Mounting example (5)

Installation in the dashboard

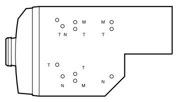
Notes

- *Before installing, make sure that the catches on both sides of the bracket ① are bent inwards 3.5 mm (5/32 in). If the catches are straight or bent outwards, the unit will not be installed securely and may spring out (5-1).*
- *Bend these claws outward for a tight fit, if necessary (5-2).*
- *Mount the unit onto the supplied bracket ① (5-3).*

Mounting the unit in a Japanese car (6)

You may not be able to install this unit in some makes of Japanese cars. In such a case, consult your Sony dealer.

When mounting this unit to the preinstalled brackets of your car, use the supplied screws ⑤ in the appropriate screw holes, based on your car: T for TOYOTA, M for MITSUBISHI and N for NISSAN.



Note

To prevent malfunction, install only with the supplied screws ⑤ .

Warning if your car's ignition has no ACC position

Be sure to set the Auto Off function. For details, see the supplied Operating Instructions.
The unit will shut off completely and automatically in the set time after the unit is turned off, which prevents battery drain.
If you do not set the Auto Off function, press and hold (SOURCE/OFF) until the display disappears each time you turn the ignition off.

Fuse replacement (7)

When replacing the fuse, be sure to use one matching the amperage rating stated on the original fuse. If the fuse blows, check the power connection and replace the fuse. If the fuse blows again after replacement, there may be an internal malfunction. In such a case, consult your nearest Sony dealer.

Installing the microphone (8)

To capture your voice during handsfree calling, you need to install the microphone (supplied).

Cautions

- Keep the microphone away from extremely high temperatures and humidity.
- It is extremely dangerous if the cord becomes wound around the steering column or gearstick. Be sure to keep it and other parts from obstructing your driving.
- If airbags or any other shock-absorbing equipment is in your car, contact the store where you purchased this unit, or the car dealer, before installation.

8-A Installing on the sun visor

1. **Install the microphone ⓐ on the clip ⓑ.**
2. **Install the clip ⓑ on the sun visor.**
3. **Install clips (not supplied) and adjust the length and position of the cord so that it does not obstruct your driving.**

8-B Installing on the dashboard

1. **Install the microphone ⓐ on the clip ⓑ, then place the cord along the groove of the clip ⓑ.**
2. **Attach the clip ⓑ to the dashboard with the double-sided tape ⓒ.**
3. **Install a clip (not supplied) and adjust the length and position of the cord so that it does not obstruct your driving.**

Notes

- *Before attaching the double-sided tape ⓒ, clean the surface of the dashboard with a dry cloth.*
- *Adjust the microphone angle to the proper position.*
- *The microphone ⓐ can be installed without using the clip ⓑ.*
  In this case, directly attach the microphone to the dashboard with the double-sided tape ⓒ. Keep the unused clip ⓑ for future use.

Notes on the tuning step

- For how to set the tuning step, see the supplied Operating Instructions.
- If replacing the car battery or changing the connections, the tuning step setting will be erased.

Español

Precauciones

- Elija cuidadosamente el lugar de montaje de forma que la unidad no interfiera con las funciones normales de conducción.
- Evite instalar la unidad donde pueda quedar expuesta a polvo, suciedad, vibraciones excesivas o altas temperaturas, por ejemplo, a la luz solar directa o cerca de conductos de calefacción.
- Para realizar una instalación segura y firme, utilice solamente elementos de instalación suministrados.

Ajuste del ángulo de montaje

Ajuste el ángulo de montaje a menos de 45°.

Extracción del soporte (4)

Antes de instalar la unidad, retire el soporte ① de la misma.

1. **Inserte ambas llaves de liberación ③ entre la unidad y el soporte ① hasta que encajen.**
2. **Presione el soporte ① y, a continuación, levante la unidad para separar ambos elementos.**

Ejemplo de montaje (5)

Instalación en el tablero

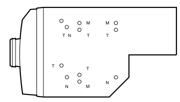
Notas

- *Antes de instalar la unidad, compruebe que los enganches de ambos lados del soporte ① estén doblados hacia adentro 3,5 mm. Si no lo están o están doblados hacia afuera, la unidad no se instalará correctamente y puede saltar (5-1).*
- *Si es necesario, doble las uñas hacia fuera para que encaje firmemente (5-2).*
- *Monte la unidad en el soporte ① suministrado (5-3).*

Montaje de la unidad en un automóvil japonés (6)

Es posible que no pueda instalar esta unidad en algunos automóviles japoneses. En tal caso, consulte a su distribuidor Sony.

Al montar esta unidad en los soportes preinstalados de su automóvil, utilice los tornillos suministrados ⑤ en los orificios correspondientes, según el modelo de su automóvil: T para TOYOTA, M para MITSUBISHI y N para NISSAN.



Nota

Para evitar que se produzcan fallas de funcionamiento, realice la instalación solamente con los tornillos suministrados ⑤.

Advertencia: si el encendido del automóvil no dispone de una posición ACC

Asegúrese de ajustar la función de desconexión automática. Para obtener más información, consulte el manual de instrucciones suministrado.
La unidad se apagará completa y automáticamente en el tiempo establecido después de que se desconecte la unidad, lo que evita que se desgaste la batería.
Si no ha ajustado la función de desconexión automática, mantenga presionado (SOURCE/OFF) cada vez que apague el interruptor de encendido, hasta que la pantalla desaparezca.

Sustitución del fusible (7)

Al sustituir el fusible, asegúrese de utilizar uno cuyo amperaje coincida con el especificado en el original. Si el fusible se funde, verifique la conexión de alimentación y sustitúyalo. Si el fusible vuelve a fundirse después de sustituirlo, es posible que exista alguna falla de funcionamiento interno. En tal caso, consulte con el distribuidor Sony más cercano.

Instalación del micrófono (8)

Para capturar la voz durante llamadas con manos libres, debe instalar el micrófono (suministrado).

Precauciones

- Mantenga el micrófono alejado de lugares con humedad y temperaturas muy altas.
- Que el cable se enrolle alrededor del volante o de la palanca de cambios es extremadamente peligroso. Asegúrese de impedir que el cable y otros componentes obstruyan la conducción.
- Si el vehículo dispone de airbags u otros dispositivos de amortiguación de impactos, póngase en contacto con el establecimiento donde ha adquirido esta unidad o con el concesionario de automóviles antes de llevar a cabo la instalación.

8-A Instalación en la visera

1. **Instale el micrófono ⓐ en el clip ⓑ.**
2. **Instale el clip ⓑ en la visera.**
3. **Instale los clips (no suministrados) y ajuste la longitud y la posición del cable de modo que no obstruya la conducción.**

8-B Instalación en el salpicadero

1. **Instale el micrófono ⓐ en el clip ⓑ y, a continuación, coloque el cable en la ranura del clip ⓑ.**
2. **Enganche el clip ⓑ en el salpicadero con la cinta adhesiva de dos caras ⓒ.**
3. **Instale un clip (no suministrado) y ajuste la longitud y la posición del cable de modo que no obstruya la conducción.**

Notas

- *Antes de colocar la cinta adhesiva de doble cara ⓒ, limpie la superficie del tablero con un paño seco.*
- *Ajuste el ángulo del micrófono en la posición adecuada.*
- *El micrófono ⓐ se puede instalar sin el clip ⓑ.*
  En este caso, enganche directamente el micrófono al tablero con cinta adhesiva de dos caras ⓒ. Conserve el clip sin usar ⓑ por si lo necesita en el futuro.

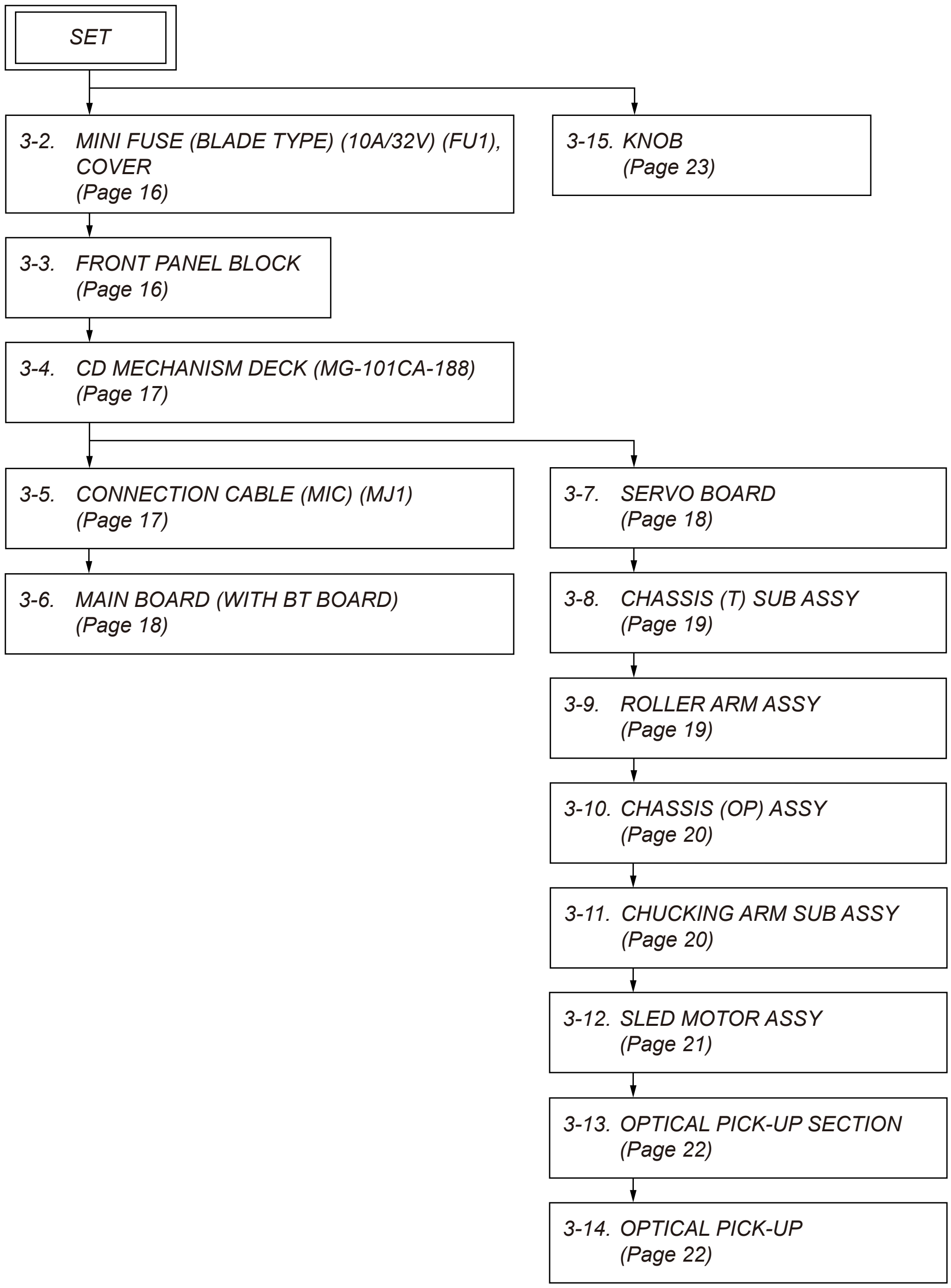
Notas acerca de la sintonización

- Para obtener información sobre cómo ajustar la sintonización, consulte el manual de instrucciones suministrado.
- Si se reemplaza la batería del auto o se cambian las conecciones, la configuración de la sintonización se borrará.

SECTION 3
DISASSEMBLY

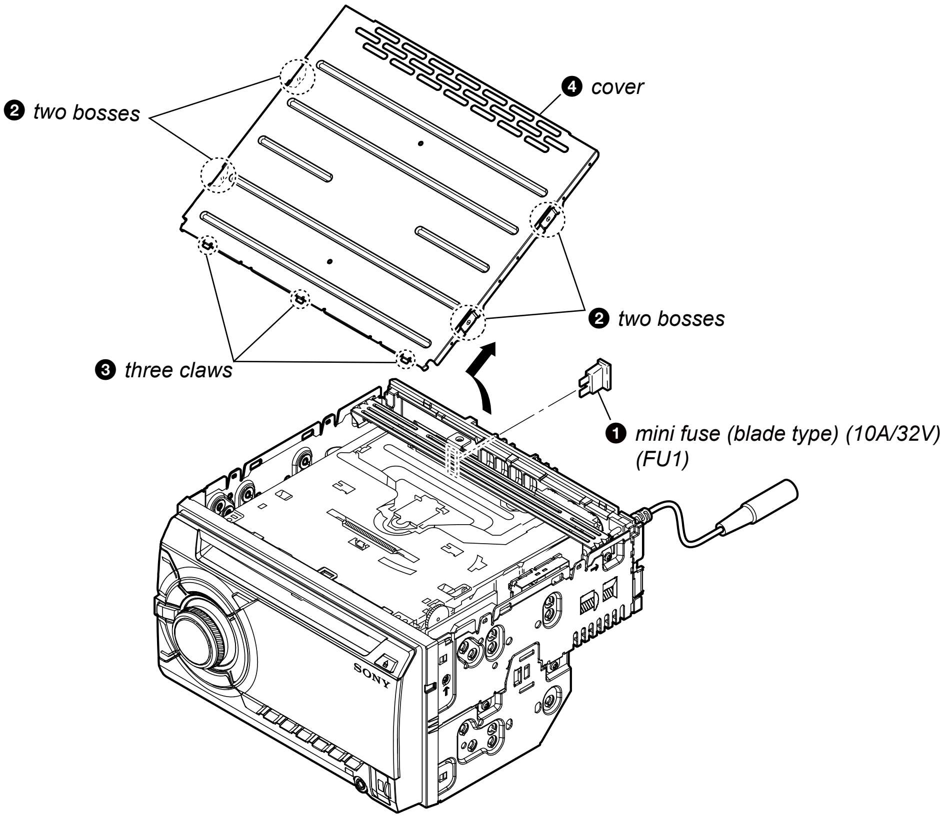
- This set can be disassembled in the order shown below.

3-1. DISASSEMBLY FLOW

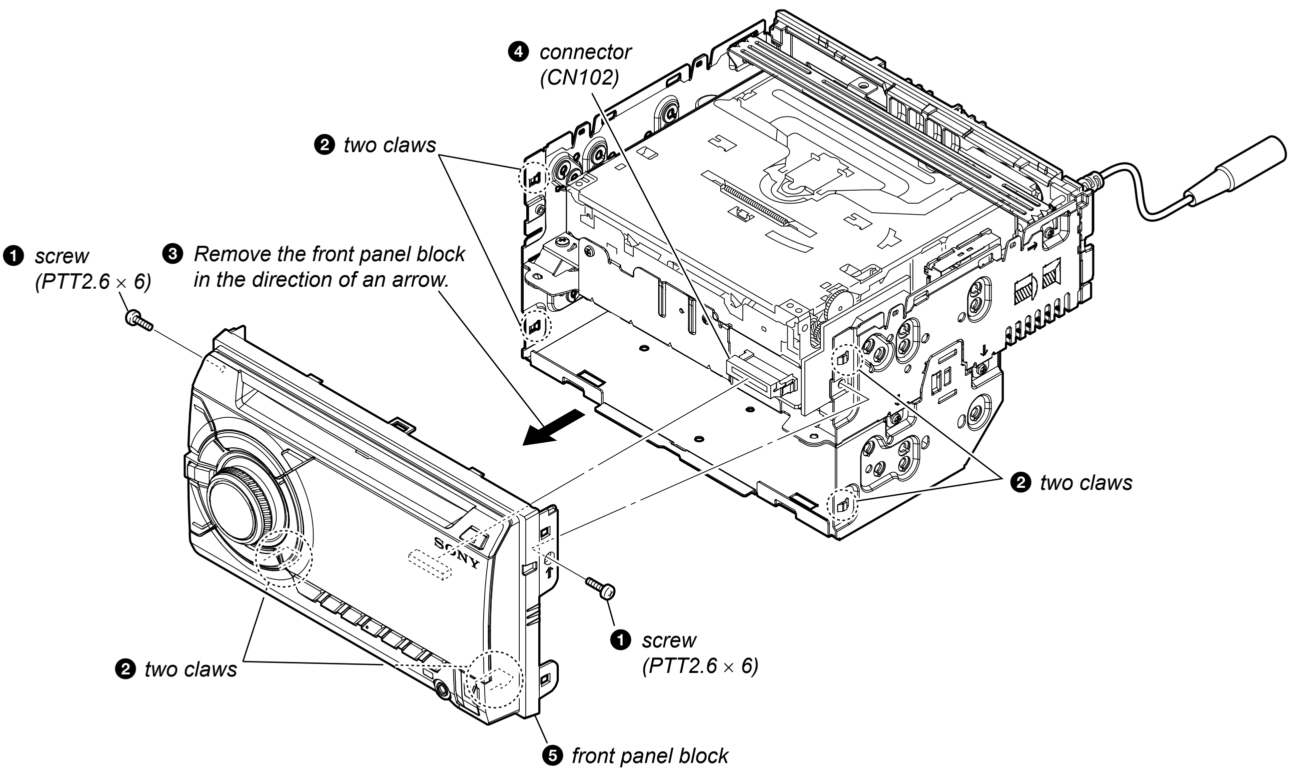


Note: Follow the disassembly procedure in the numerical order given.

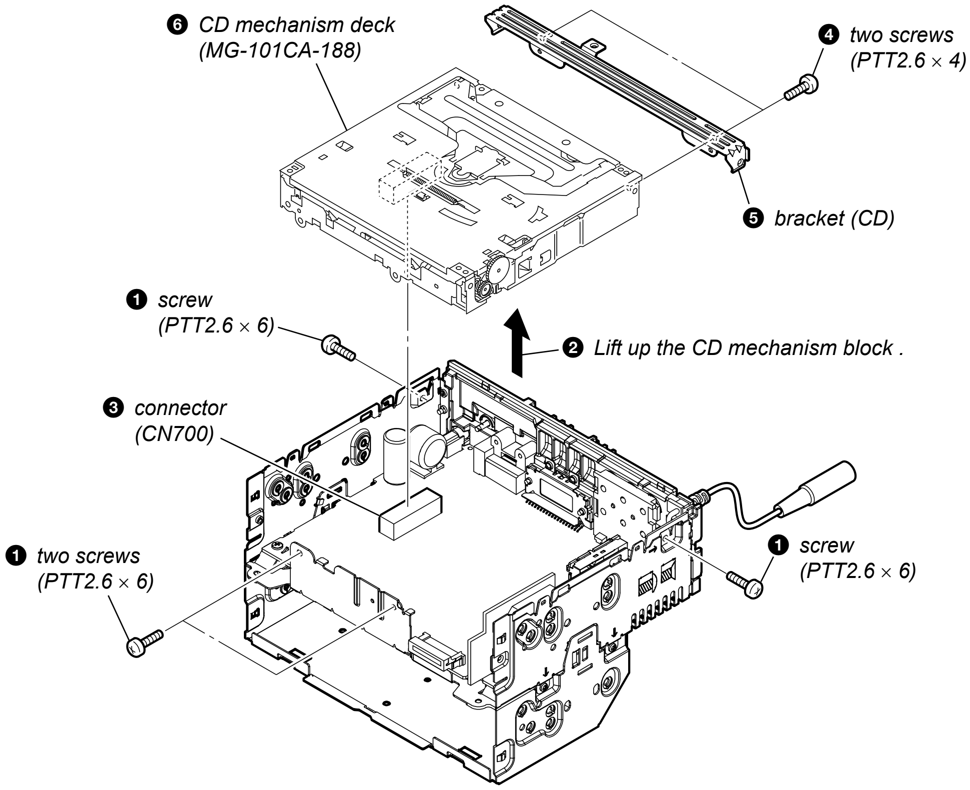
3-2. MINI FUSE (BLADE TYPE) (10A/32V) (FU1), COVER



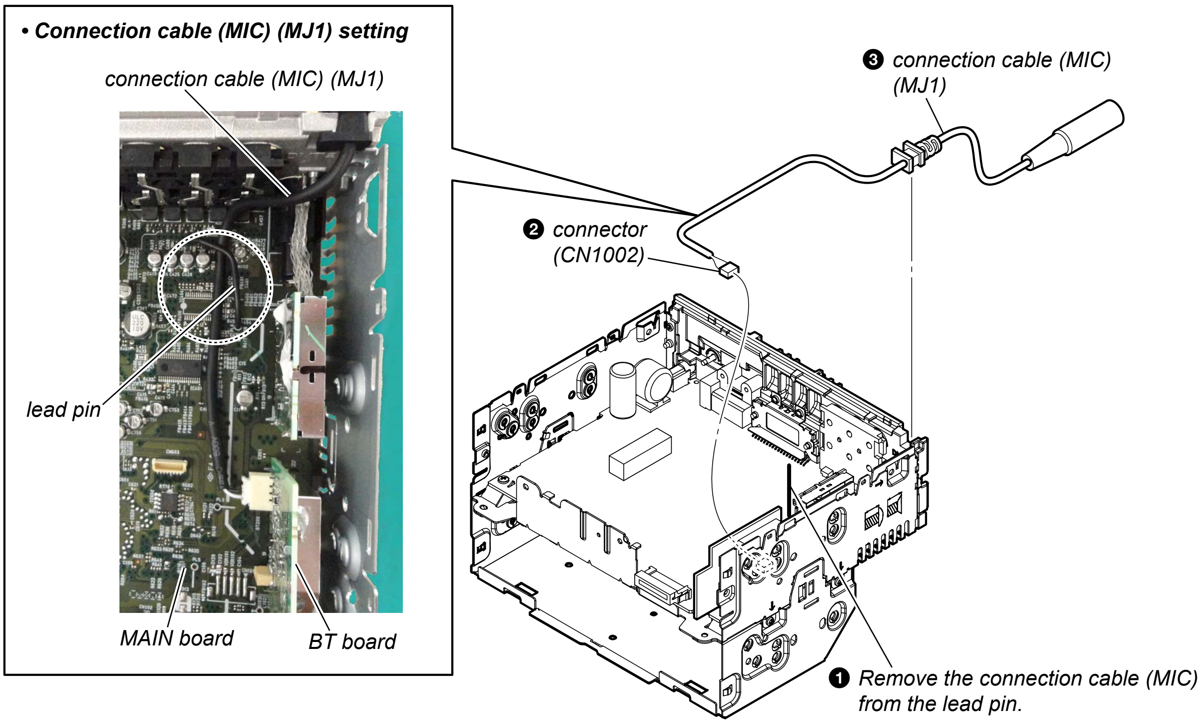
3-3. FRONT PANEL BLOCK



3-4. CD MECHANISM DECK (MG-101CA-188)

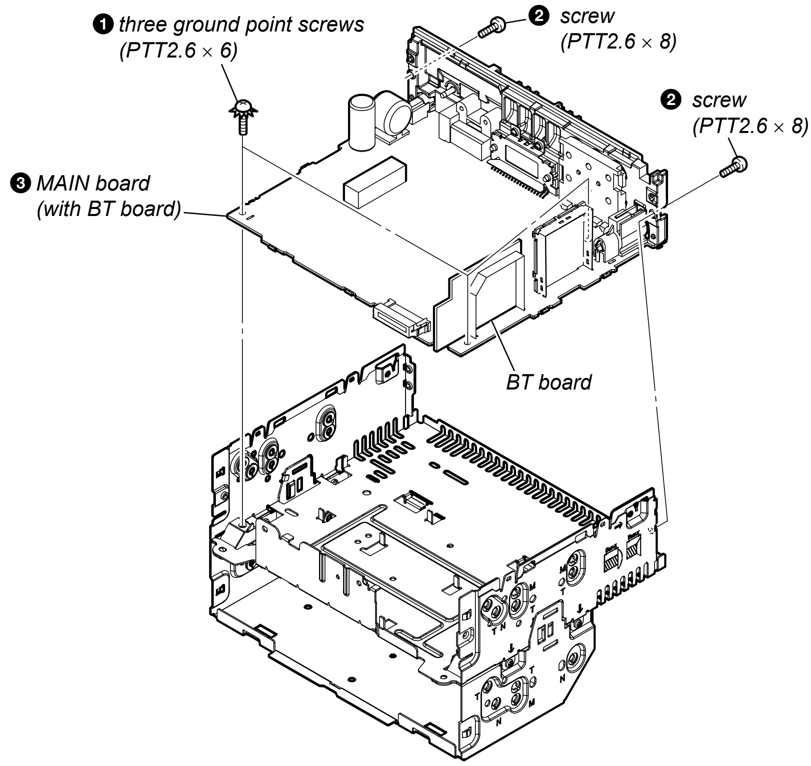


3-5. CONNECTION CABLE (MIC) (MJ1)

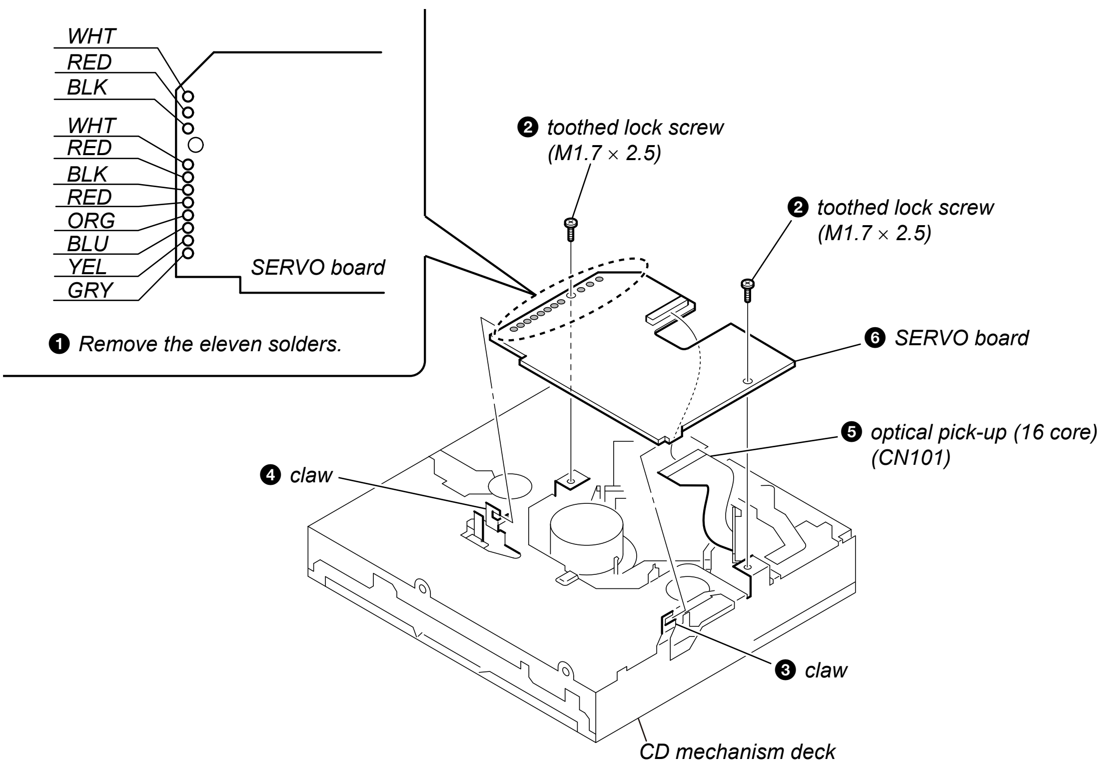


3-6. MAIN BOARD (WITH BT BOARD)

Note: When the complete MAIN board is replaced, the destination setting is necessary. Refer to "NOTE THE MAIN BOARD OR SYSTEM CONTROLLER (IC501) REPLACING" on page 4.

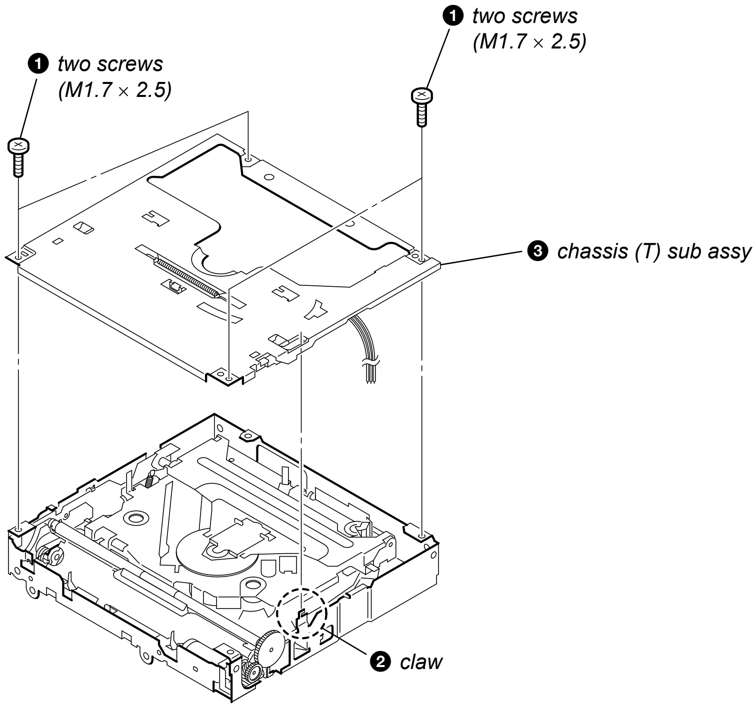


3-7. SERVO BOARD

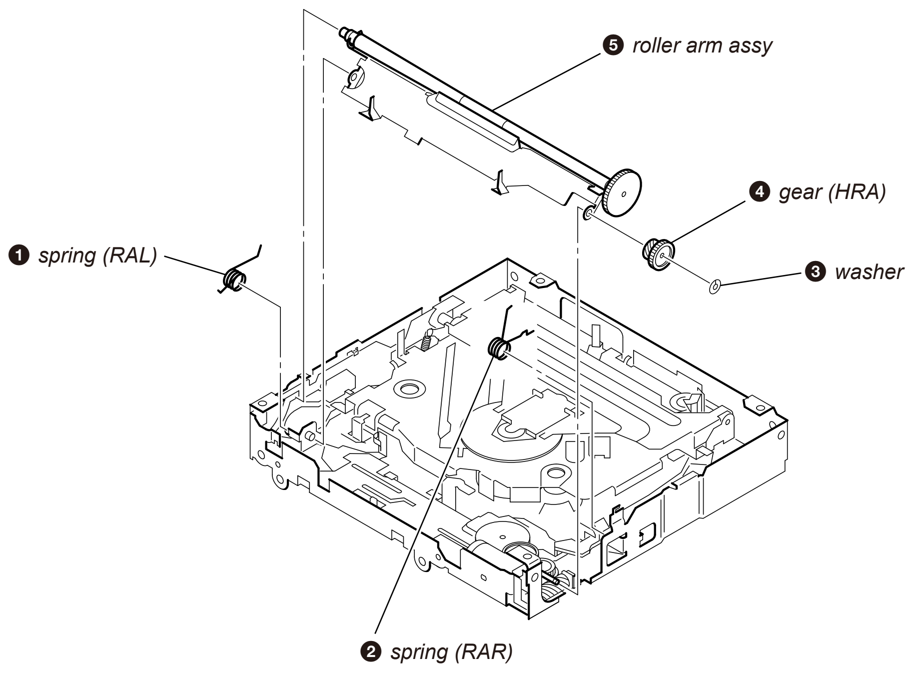


– CD mechanism deck bottom side view –

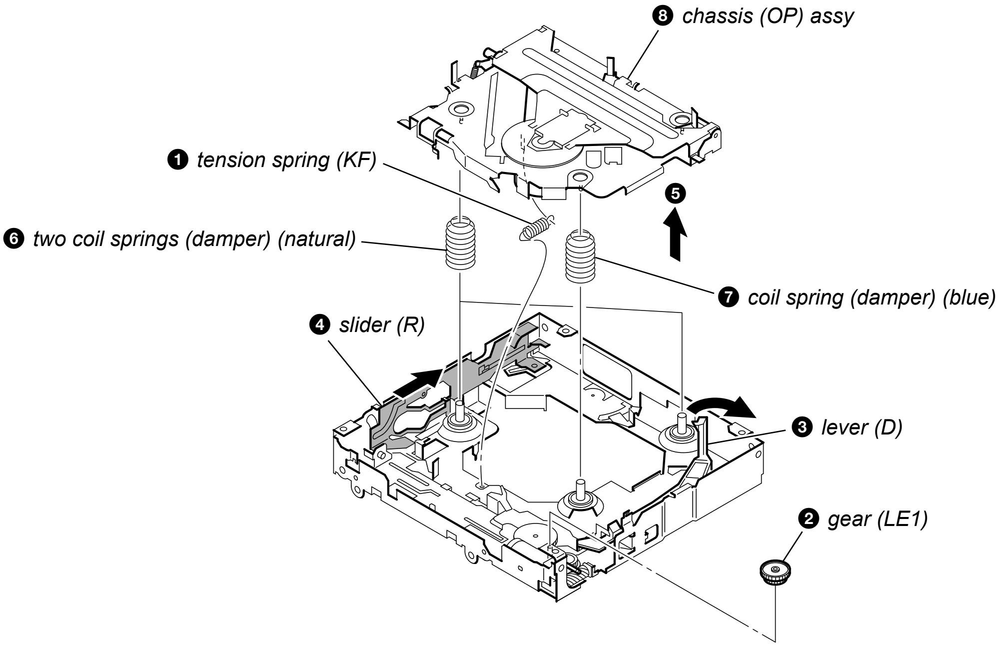
3-8. CHASSIS (T) SUB ASSY



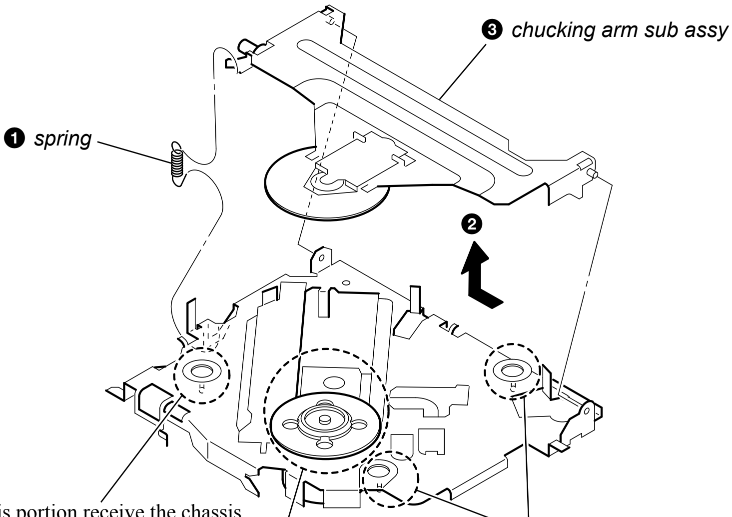
3-9. ROLLER ARM ASSY



3-10. CHASSIS (OP) ASSY



3-11. CHUCKING ARM SUB ASSY

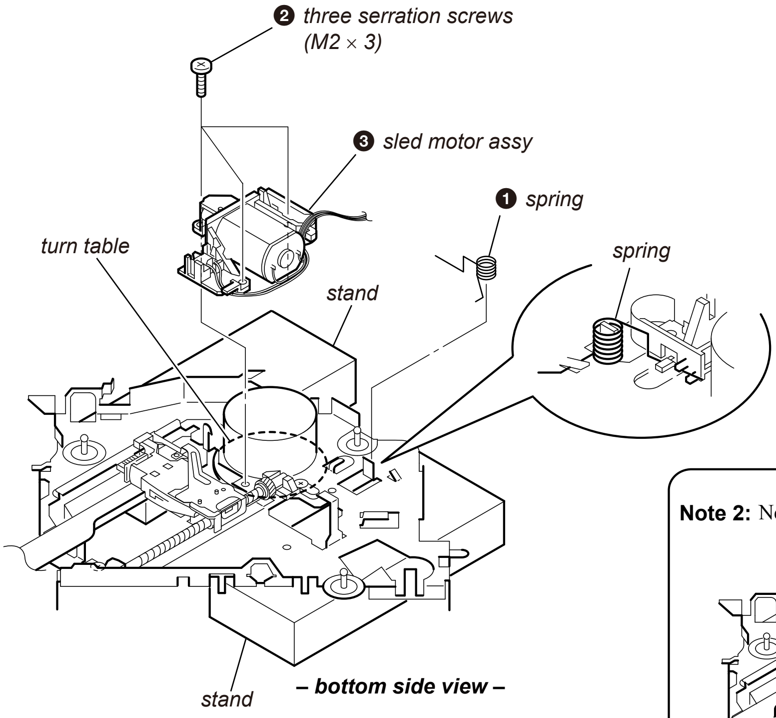


Note 1: Have this portion receive the chassis.

Note 1: Have this portion receive the chassis.

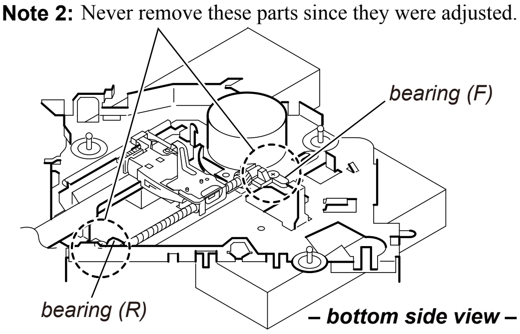
Note 2: Be careful not to touch the turn table.

3-12. SLED MOTOR ASSY

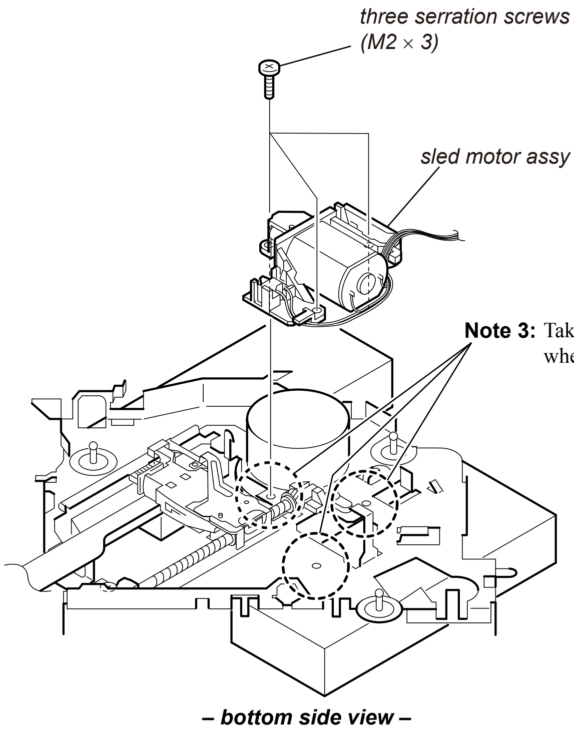


Note 1: Place the stand with care not to touch the turn table.

Note 2: Never remove these parts since they were adjusted.

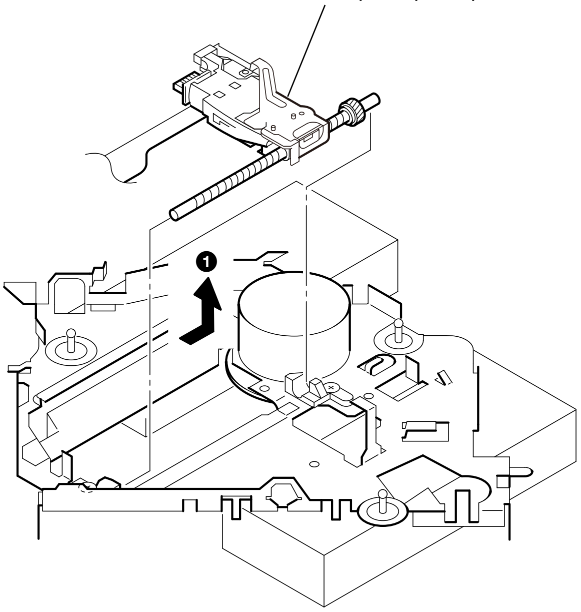


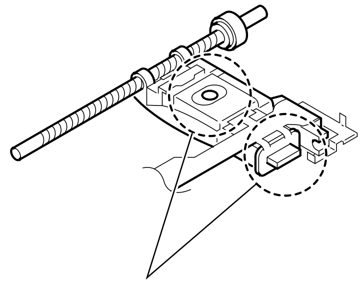
• Note for Assembly



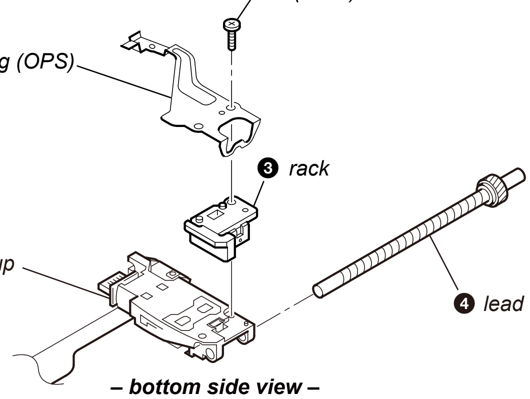
Note 3: Take care to prevent the chassis from being bent when tightening the three machine screws.

3-13. OPTICAL PICK-UP SECTION

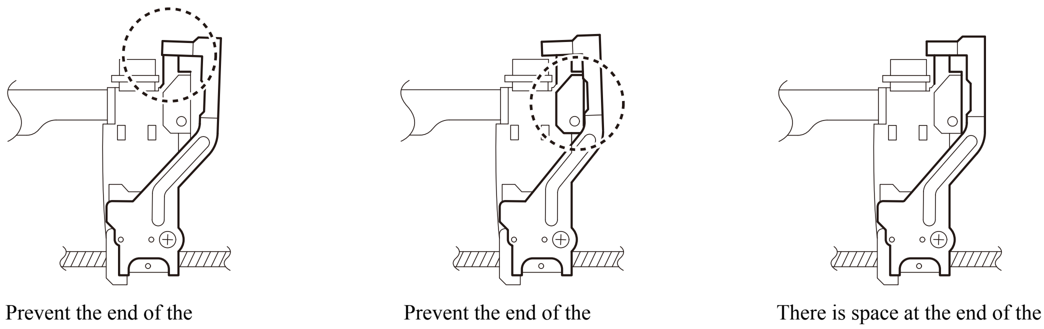




3-14. OPTICAL PICK-UP

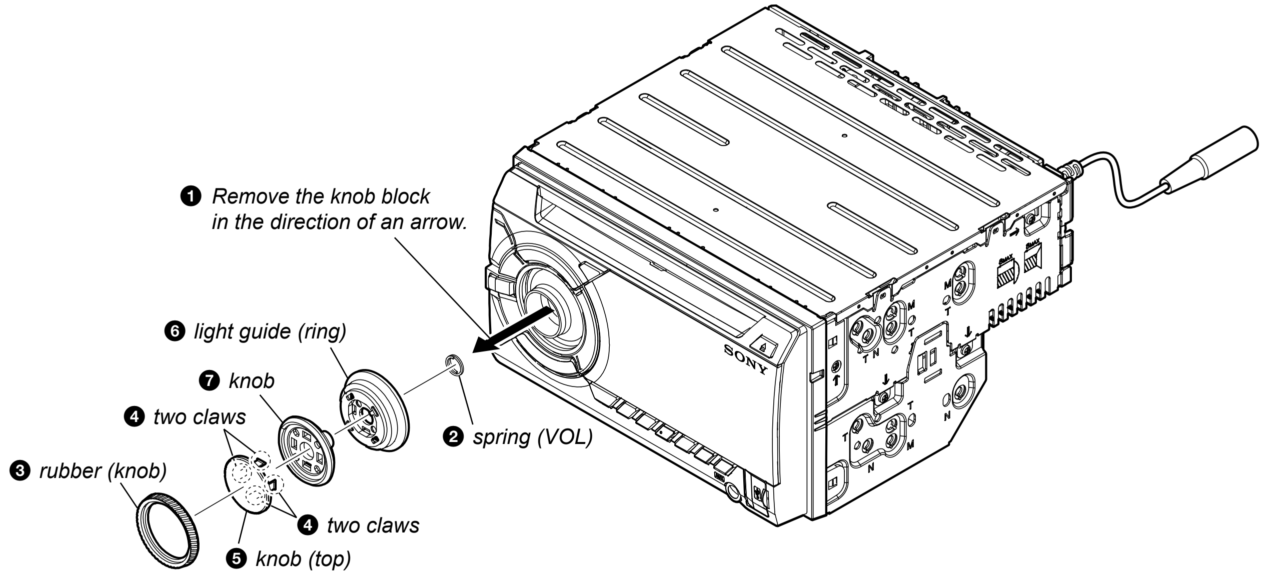


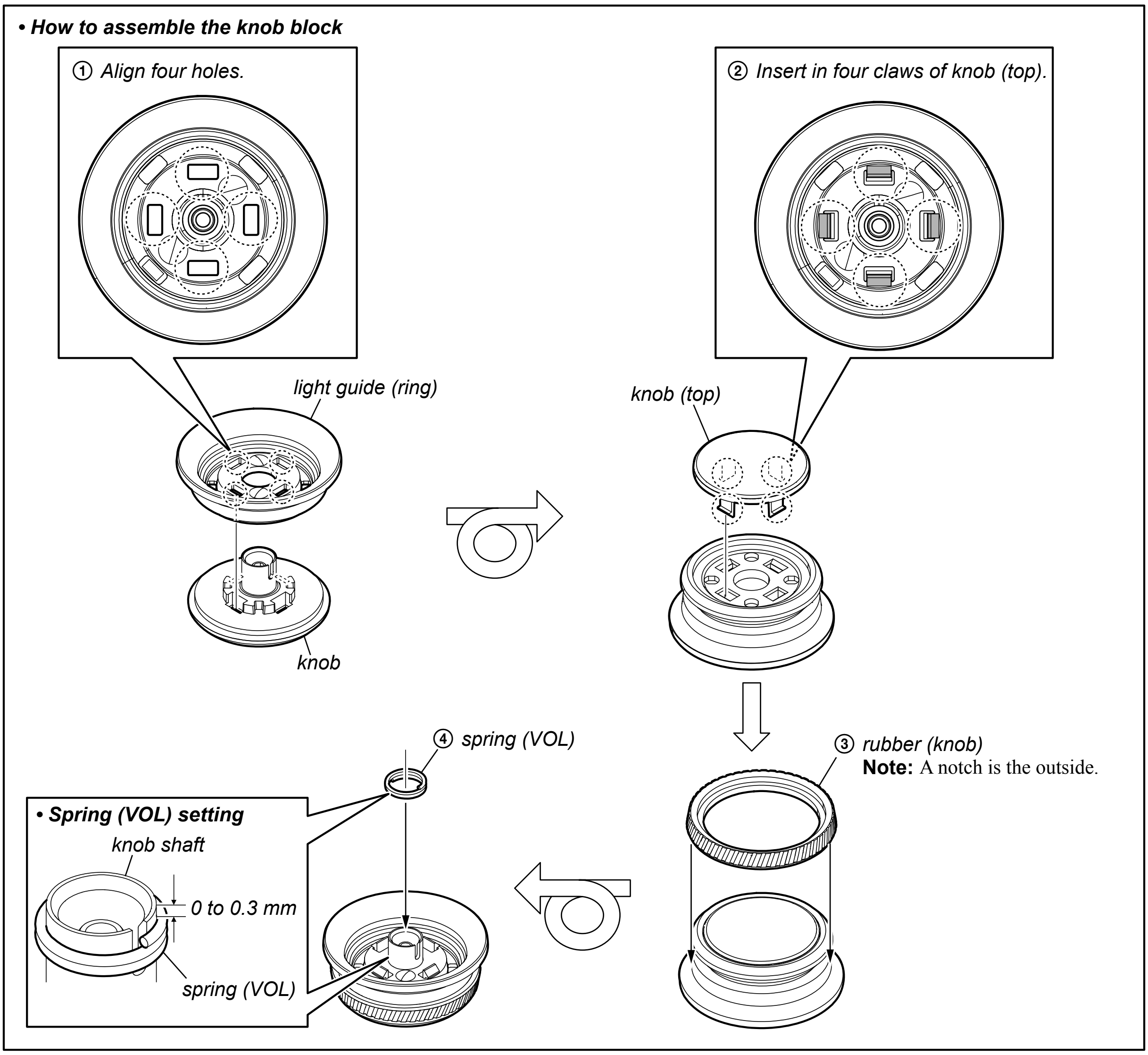
• Notes for Assembly



Prevent the end of the leaf spring (OPS) from being in contact with the OP slide base.	Prevent the end of the leaf spring (OPS) from being in contact with the OP slide base.	There is space at the end of the leaf spring (OPS) to avoid contact with the slide.

3-15. KNOB


❶ Remove the knob block
in the direction of an arrow.
❻ light guide (ring)
❼ knob
❹ two claws
❸ rubber (knob)
❷ spring (VOL)
❹ two claws
❺ knob (top)
SONY


• How to assemble the knob block
① Align four holes.
② Insert in four claws of knob (top).
light guide (ring)
knob
knob (top)
④ spring (VOL)
③ rubber (knob)
Note: A notch is the outside.
• Spring (VOL) setting
knob shaft
0 to 0.3 mm
spring (VOL)

SECTION 4
TEST MODE

SETTING THE TEST MODE

Setting method:

1. Press the [▬ OFF SOURCE] button for 1 second to turn the power off.
2. Press the [⟳ 4] → [MIC/ZAP 5] → [▼ ALBUM 1] buttons sequentially (the [▼ ALBUM 1] button is pressed for two seconds).
3. It is set to the test mode, and all segments of the liquid crystal display light.

Releasing method:

Press the [▬ OFF SOURCE] button for 1 second.

MICROPHONE AUDIO LOOPBACK

To confirm the state of the external microphone used when a handsfree function is used, the microphone audio is output from the speaker.
The breakdown judgment of the microphone can be done without connecting H/F with the cellular phone.

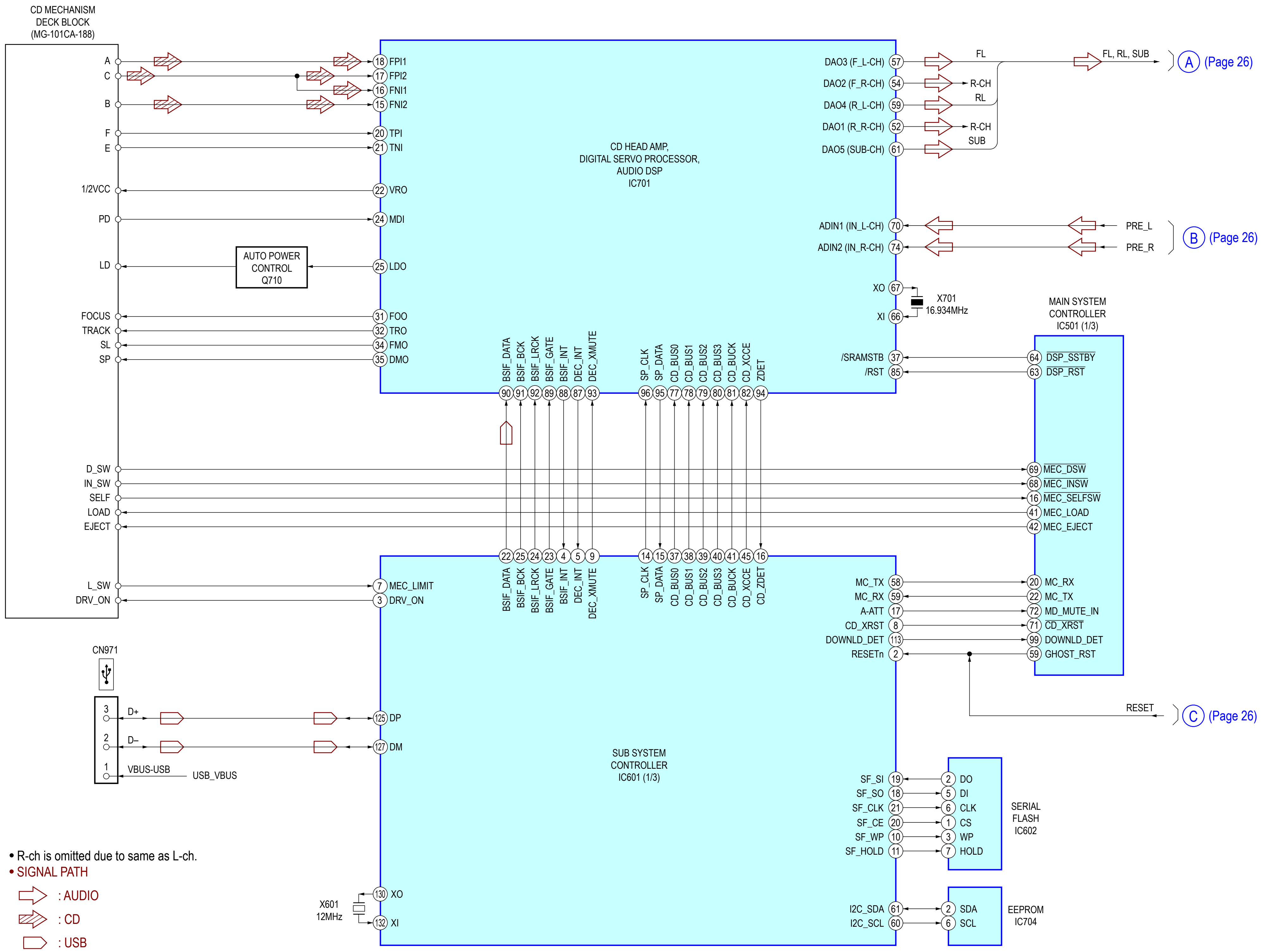
Procedure:

1. Enter the test mode.
2. Press the [▬ OFF SOURCE] button to select the Bluetooth Phone function.
3. On/off of the microphone audio loopback function changes whenever the [ALBUM ▲ 2] button is pressed (“ALBUM” is displayed in the liquid crystal display).

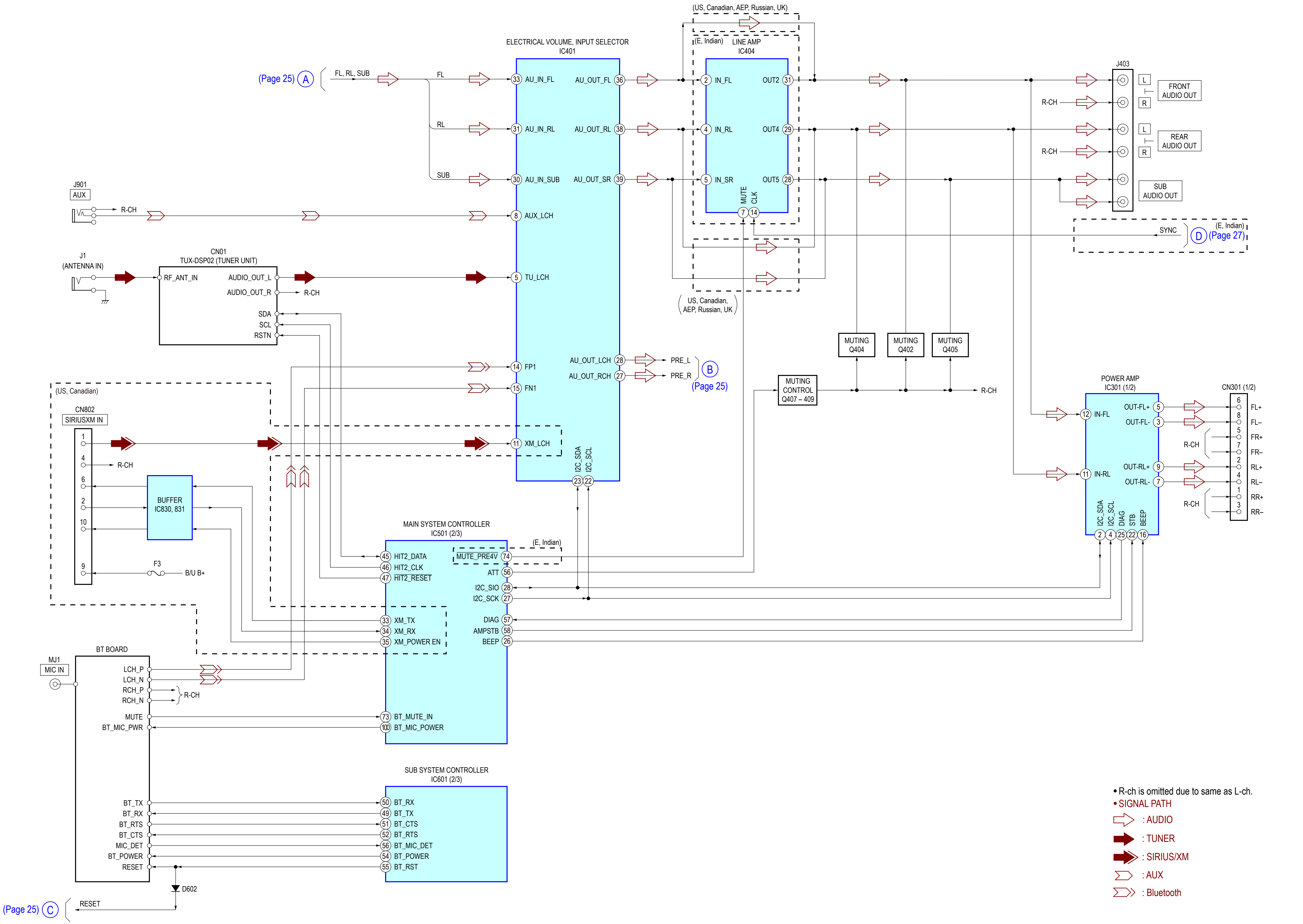
LOOPBACK	ALBUM
ON	Lit
OFF	None

SECTION 5
DIAGRAMS

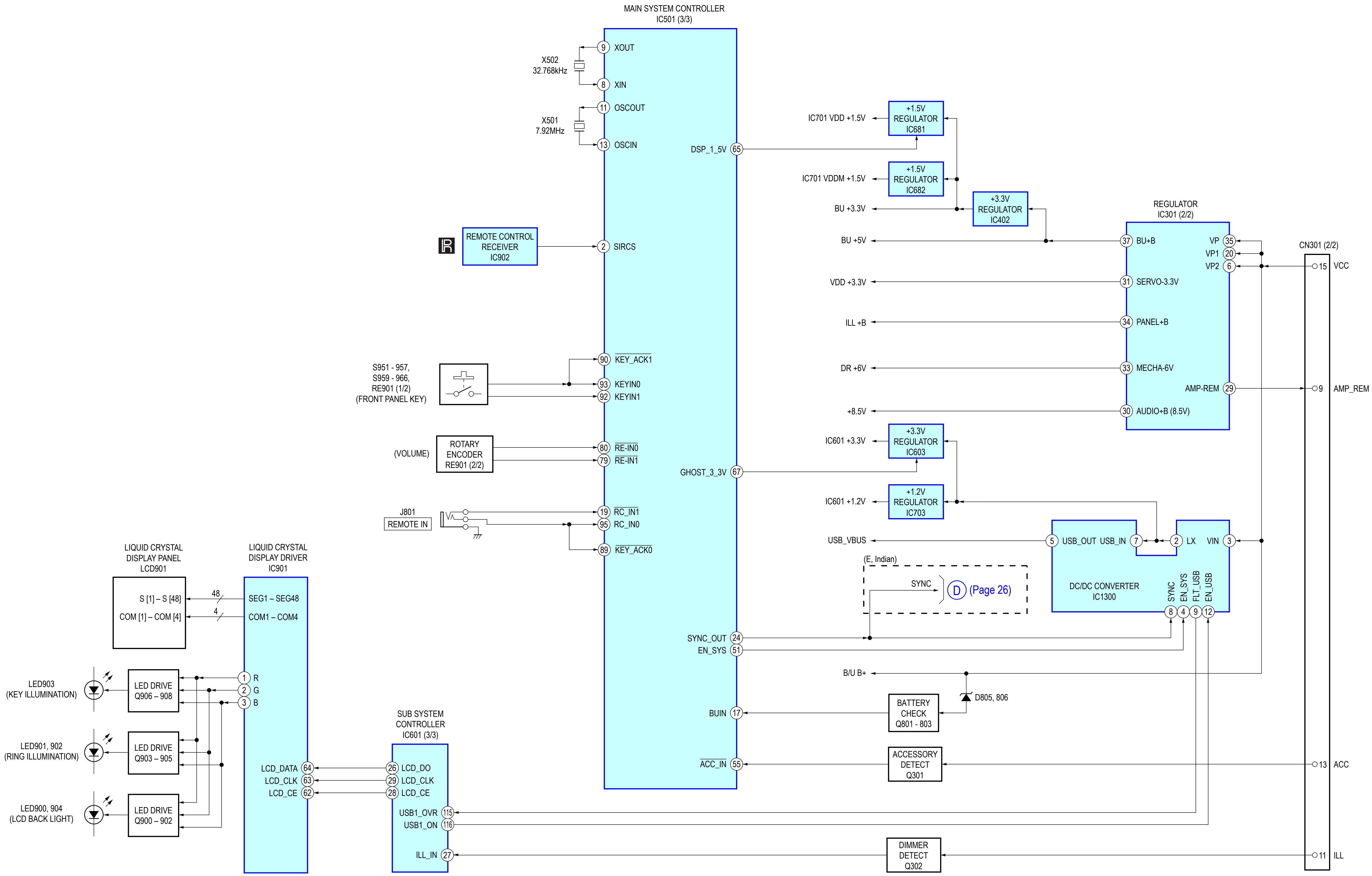
5-1. BLOCK DIAGRAM - SERVO Section -



5-2. BLOCK DIAGRAM - MAIN Section -



5-3. BLOCK DIAGRAM - PANEL/POWER SUPPLY Section -

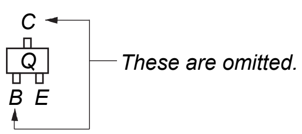


THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS.
(In addition to this, the necessary note is printed in each block.)

For Printed Wiring Boards.
Note:
- o———: Parts extracted from the component side.
- ———: Parts extracted from the conductor side.
- △ : Internal component.
- ▬ : Pattern from the side which enables seeing.
  (The other layers' patterns are not indicated.)

Caution:	
Pattern face side: (Conductor Side)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Component Side)	Parts on the parts face side seen from the parts face are indicated.

- Indication of transistor.



- Abbreviation
  CND : Canadian model
  IND : Indian model
  RU : Russian model

Note 1: When the complete MAIN board is replaced, the destination setting is necessary. Refer to "NOTE THE MAIN BOARD OR SYSTEM CONTROLLER (IC501) REPLACING" on page 4.

Note 2: When the complete BT board or complete MAIN board (including BT board) is replaced, it is necessary to confirm operation. Refer to "BLUETOOTH FUNCTION CHECKING METHOD USING A CELLULAR PHONE" on page 8.

For Schematic Diagrams.
Note:
- All capacitors are in µF unless otherwise noted. (p: pF) 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : Internal component.
- ▭ : Panel designation.

Note:	**Note:**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- ▬▬ : B+ Line.
- ▬ ▬ ▬ : B– Line.
- Power voltages is dc 14.4V and fed with regulated dc power supply from ACC and BATT cords.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark: TUNER (FM)
  < >: CD PLAY
  ∗ : Impossible to measure
- Voltages are taken with VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : AUDIO
  ➡ : TUNER
  ⇨ : CD
  ▷ : USB
  ➡ : SIRIUS/XM
  ⊳ : AUX
  ⊳⊳ : Bluetooth
- Abbreviation
  CND : Canadian model
  IND : Indian model
  RU : Russian model

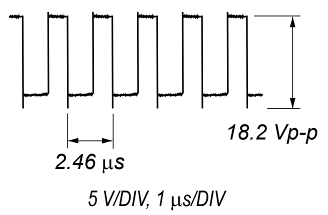
Note 1: When the complete MAIN board is replaced, the destination setting is necessary. Refer to "NOTE THE MAIN BOARD OR SYSTEM CONTROLLER (IC501) REPLACING" on page 4.

Note 2: When the complete BT board or complete MAIN board (including BT board) is replaced, it is necessary to confirm operation. Refer to "BLUETOOTH FUNCTION CHECKING METHOD USING A CELLULAR PHONE" on page 8.

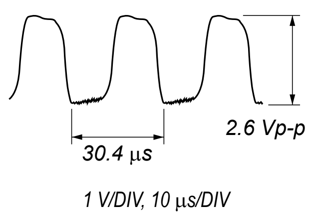
- **Waveforms**

– MAIN Board –

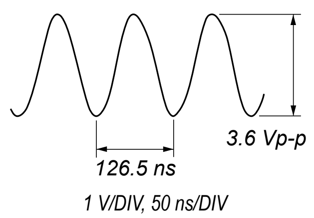
① IC1300 ① (BST)



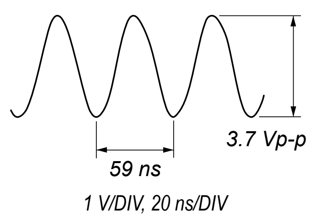
② IC501 ⑨ (XOUT)



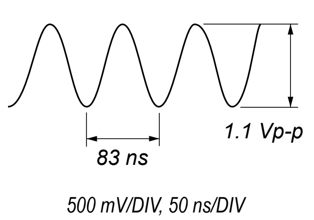
③ IC501 ⑪ (OSCOUT)



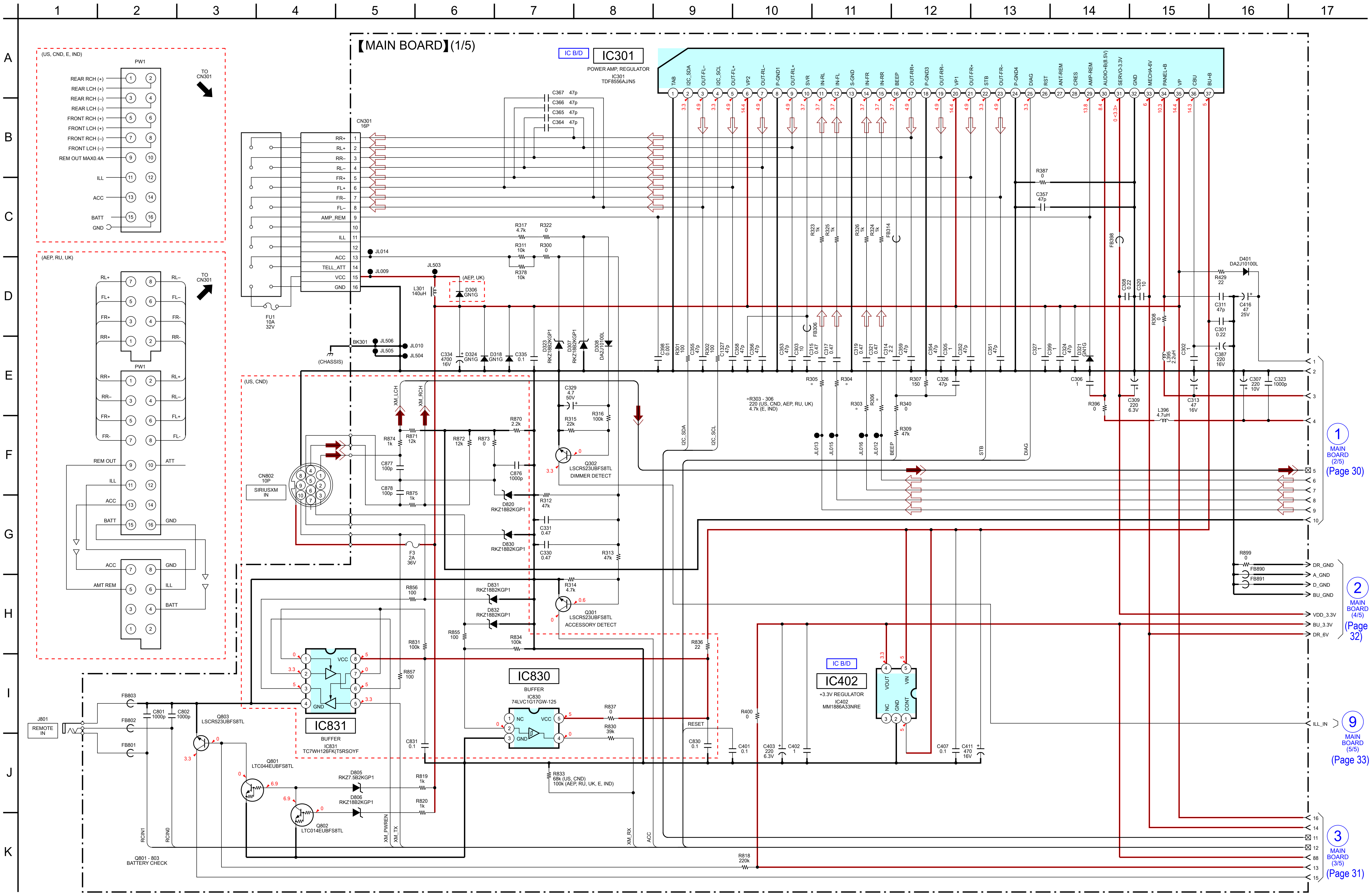
④ IC701 ⑥⑦ (XO)



⑤ IC601 ⑬⓪ (XO)

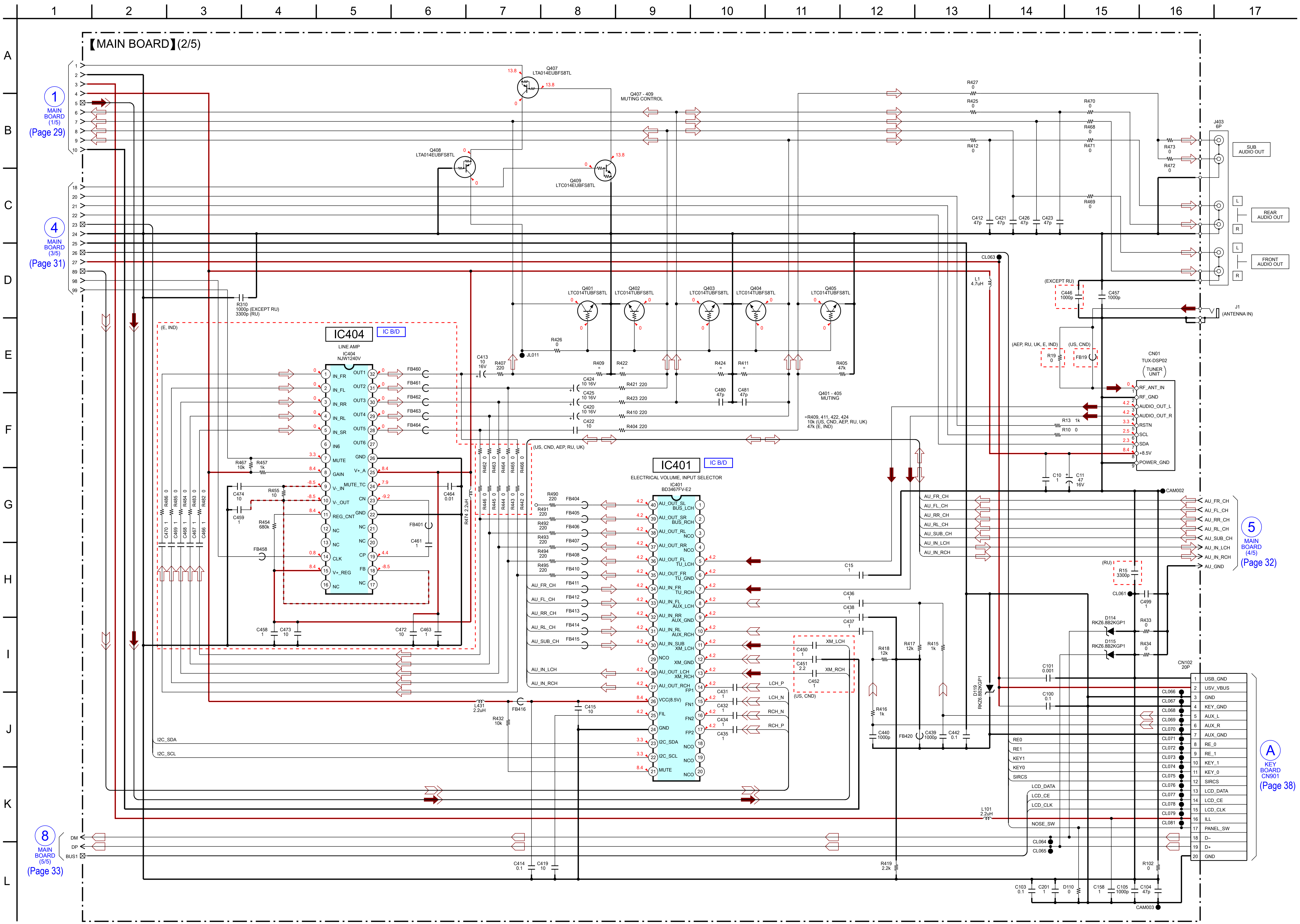


5-4. SCHEMATIC DIAGRAM - MAIN Section (1/5) - • See page 39 for IC Block Diagrams.



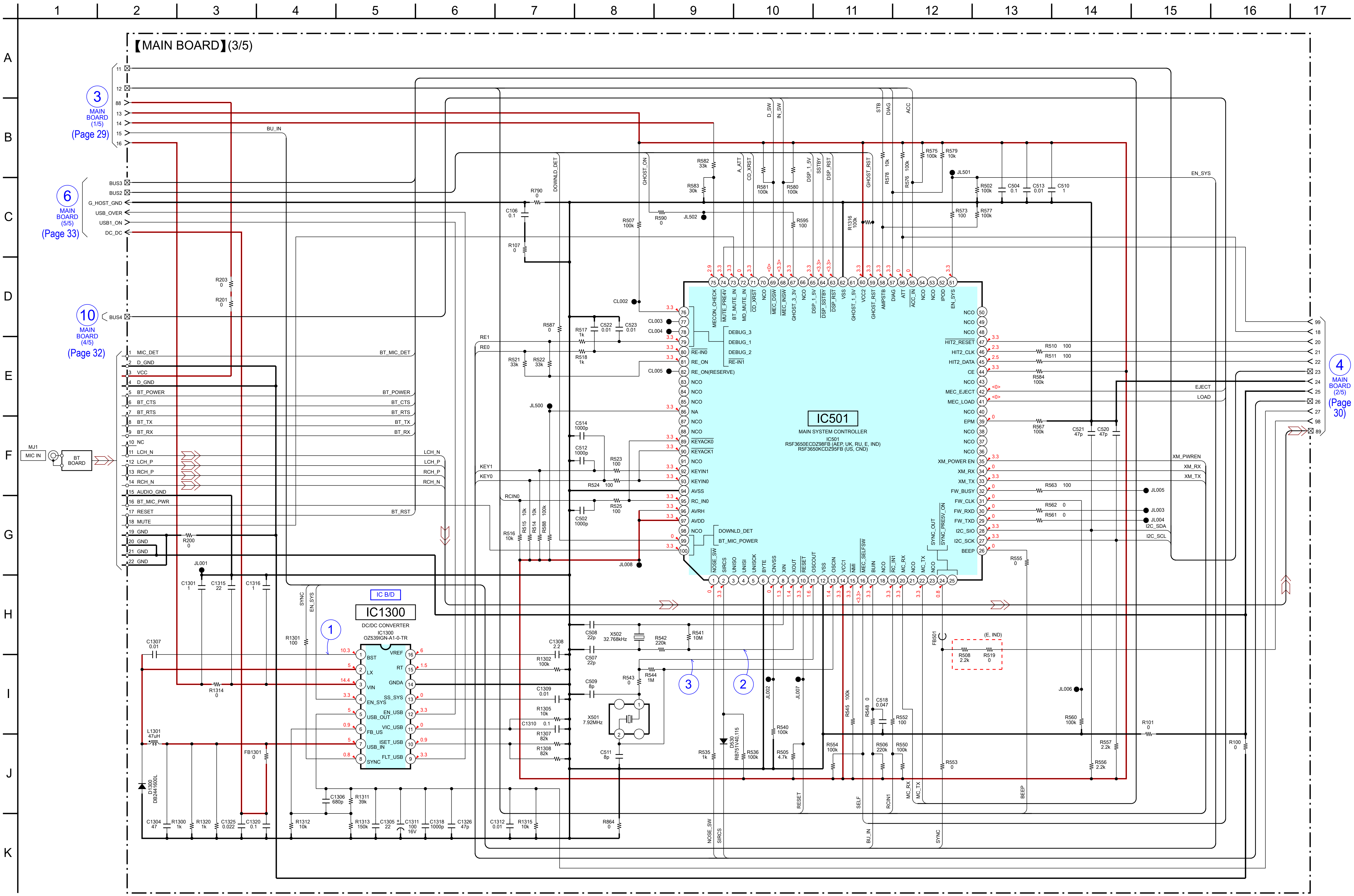
5-5. SCHEMATIC DIAGRAM - MAIN Section (2/5) -

• See page 39 for IC Block Diagrams.



5-6. SCHEMATIC DIAGRAM - MAIN Section (3/5) -

• See page 28 for Waveforms. • See page 39 for IC Block Diagrams. • See page 43 for IC Pin Function Description.

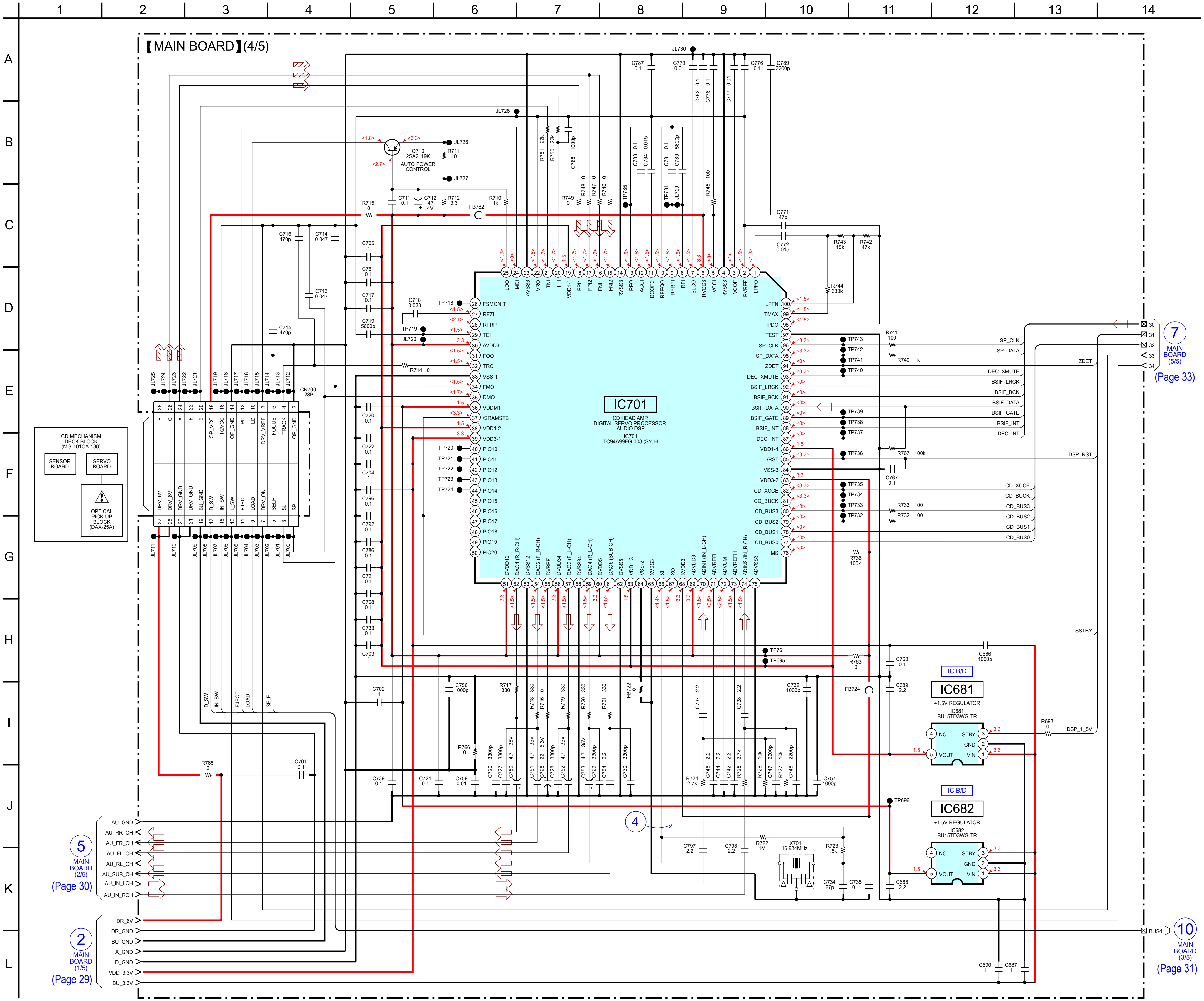


Note 1: When the BT board is defective, exchange the complete mounted board.

Note 2: When IC501 is replaced, the destination setting is necessary. Refer to "NOTE THE MAIN BOARD OR SYSTEM CONTROLLER (IC501) REPLACING" on page 4.

5-7. SCHEMATIC DIAGRAM - MAIN Section (4/5) -

• See page 28 for Waveforms. • See page 39 for IC Block Diagrams. • See page 43 for IC Pin Function Description.

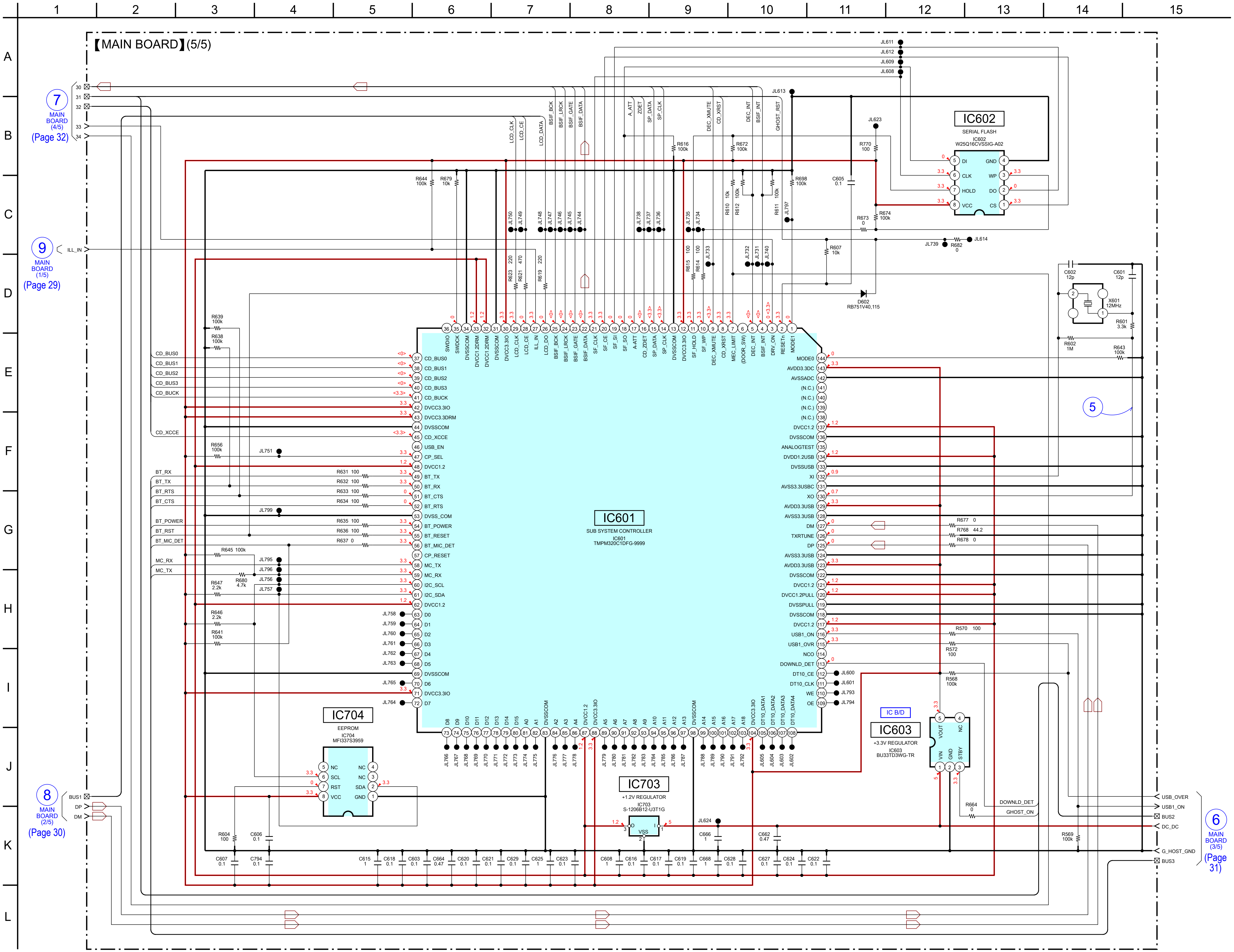


Note 1: When the SERVO board is defective, exchange the complete mounted board.

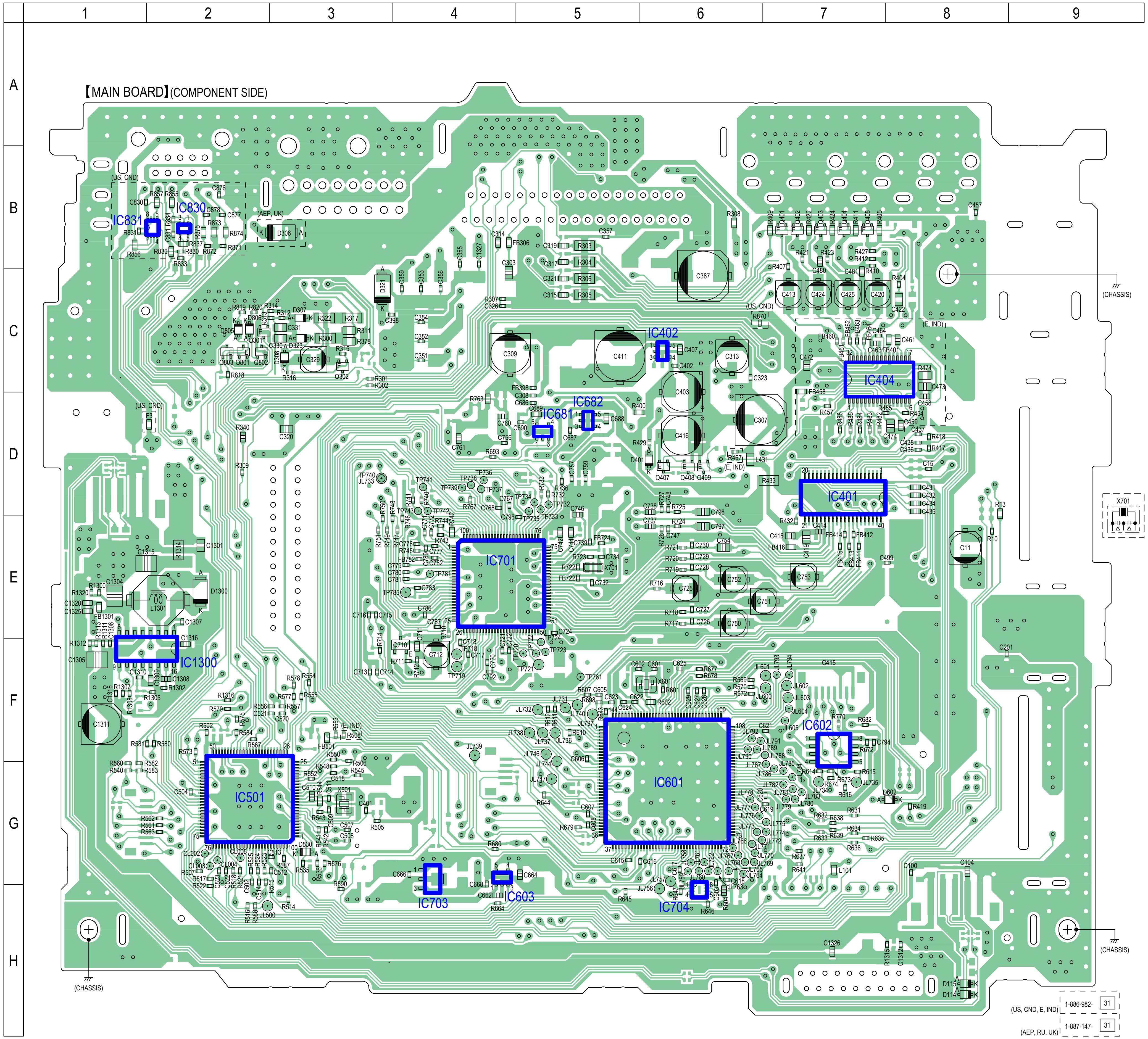
Note 2: When the SENSOR board is defective, exchange the MECHANICAL BLOCK ASSY.

5-8. SCHEMATIC DIAGRAM - MAIN Section (5/5) -

• See page 28 for Waveforms. • See page 39 for IC Block Diagrams. • See page 43 for IC Pin Function Description.



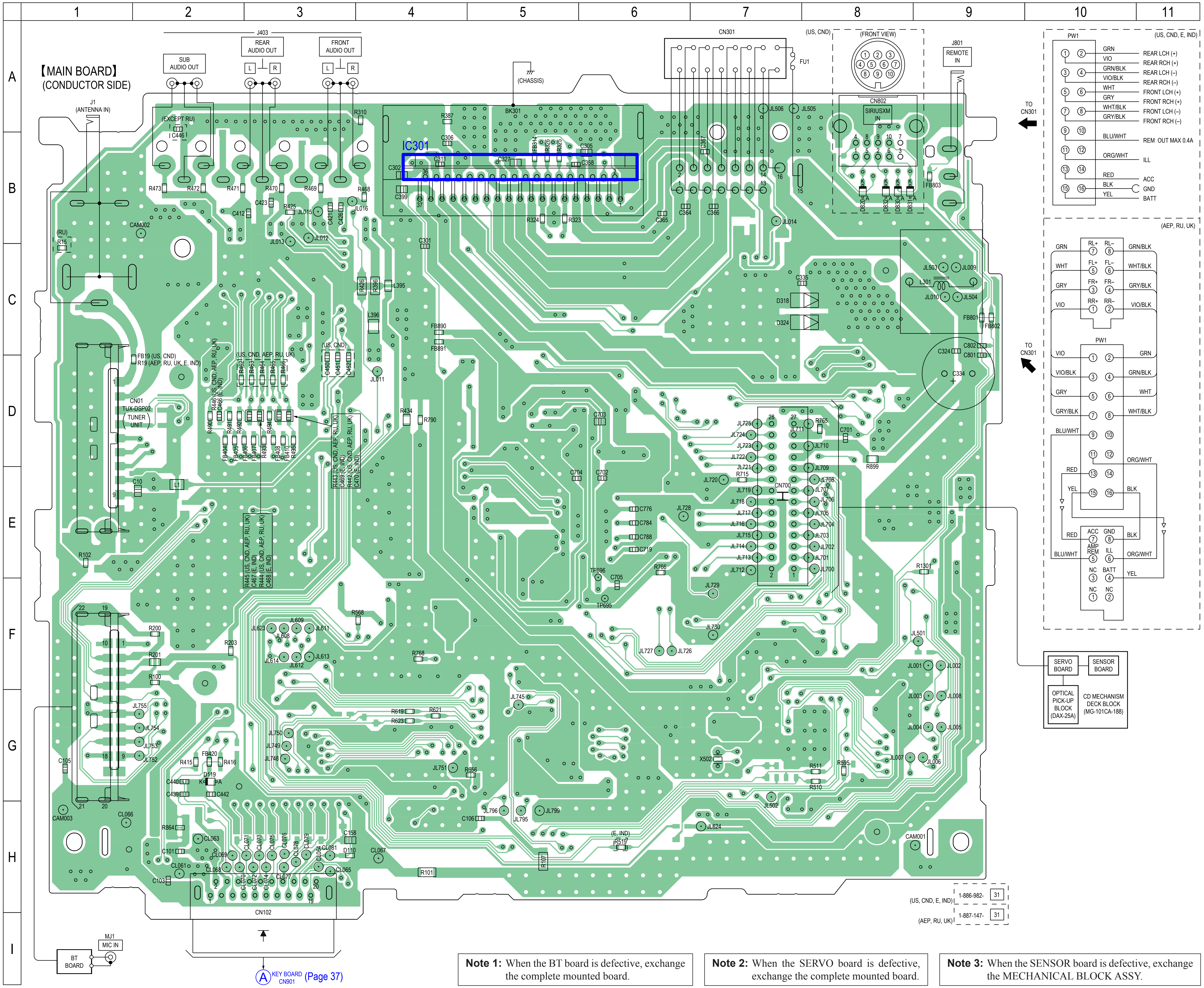
5-9. PRINTED WIRING BOARD - MAIN Section (1/2) - • : Uses unleaded solder.



Note: When IC501 is replaced, the destination setting is necessary. Refer to "NOTE THE MAIN BOARD OR SYSTEM CONTROLLER (IC501) REPLACING" on page 4.

5-10. PRINTED WIRING BOARDS - MAIN Section (2/2) -

• LF : Uses unleaded solder.

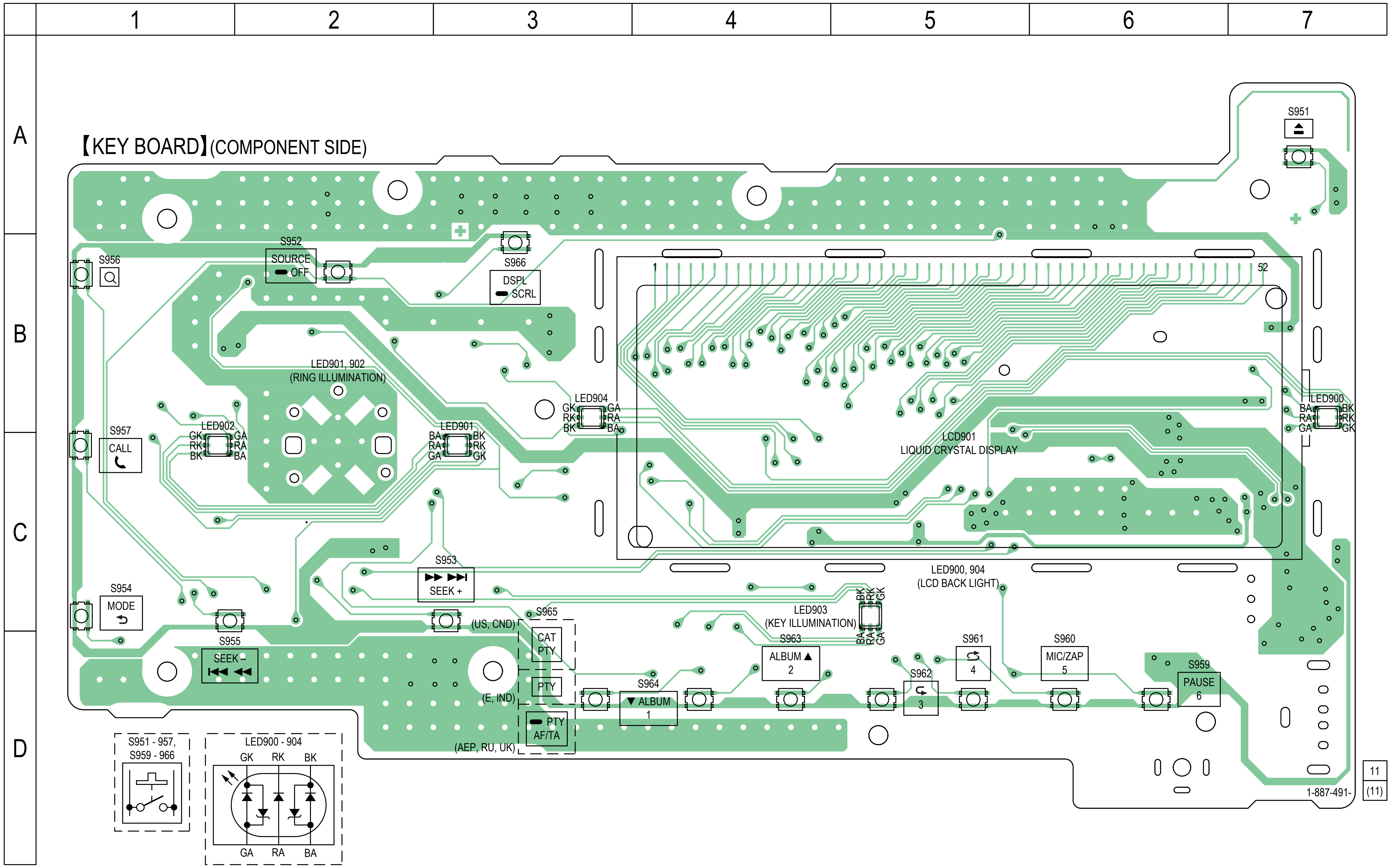


Note 1: When the BT board is defective, exchange the complete mounted board.

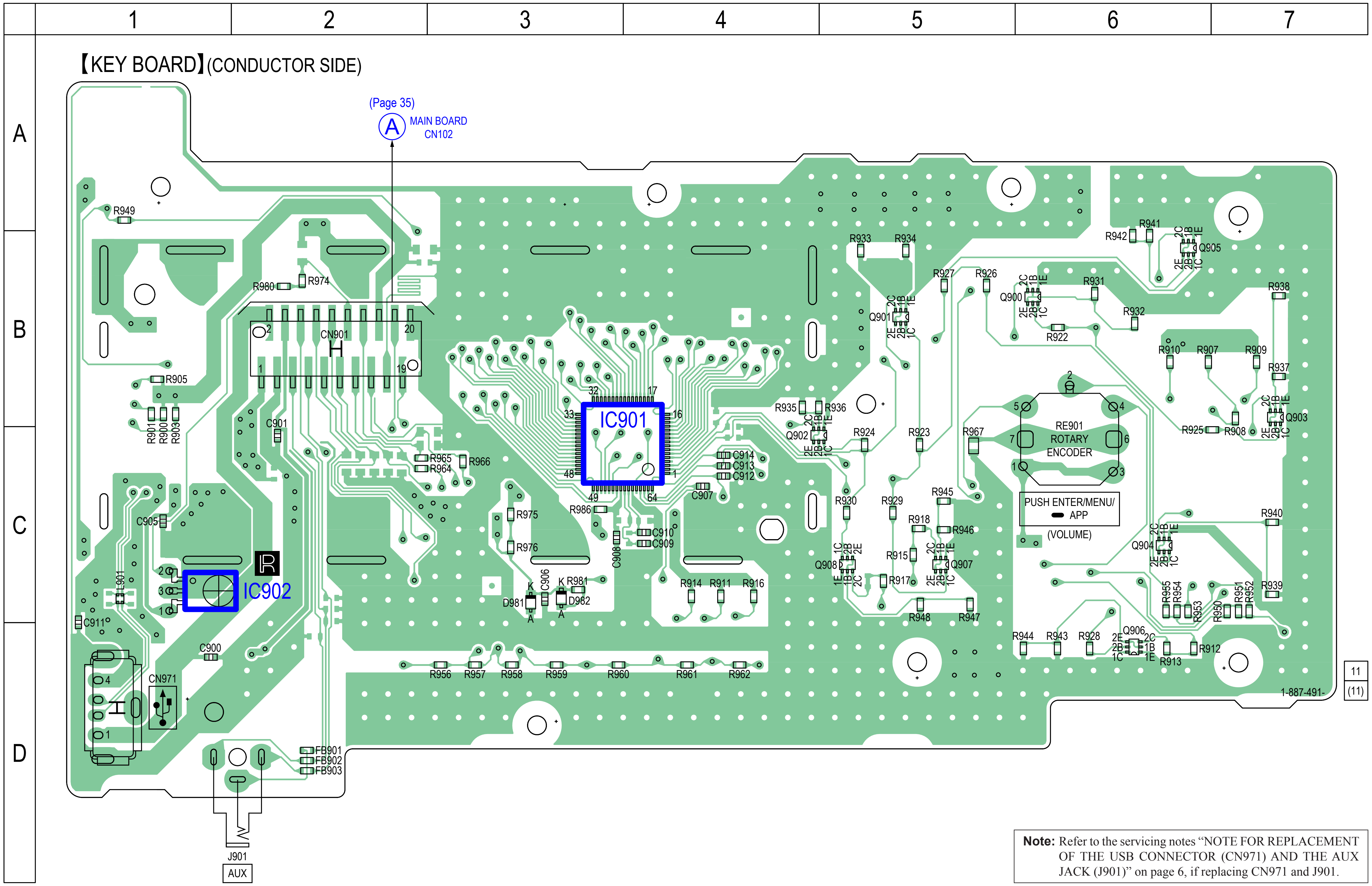
Note 2: When the SERVO board is defective, exchange the complete mounted board.

Note 3: When the SENSOR board is defective, exchange the MECHANICAL BLOCK ASSY.

5-11. PRINTED WIRING BOARD - KEY Board (Component Side) - • : Uses unleaded solder.



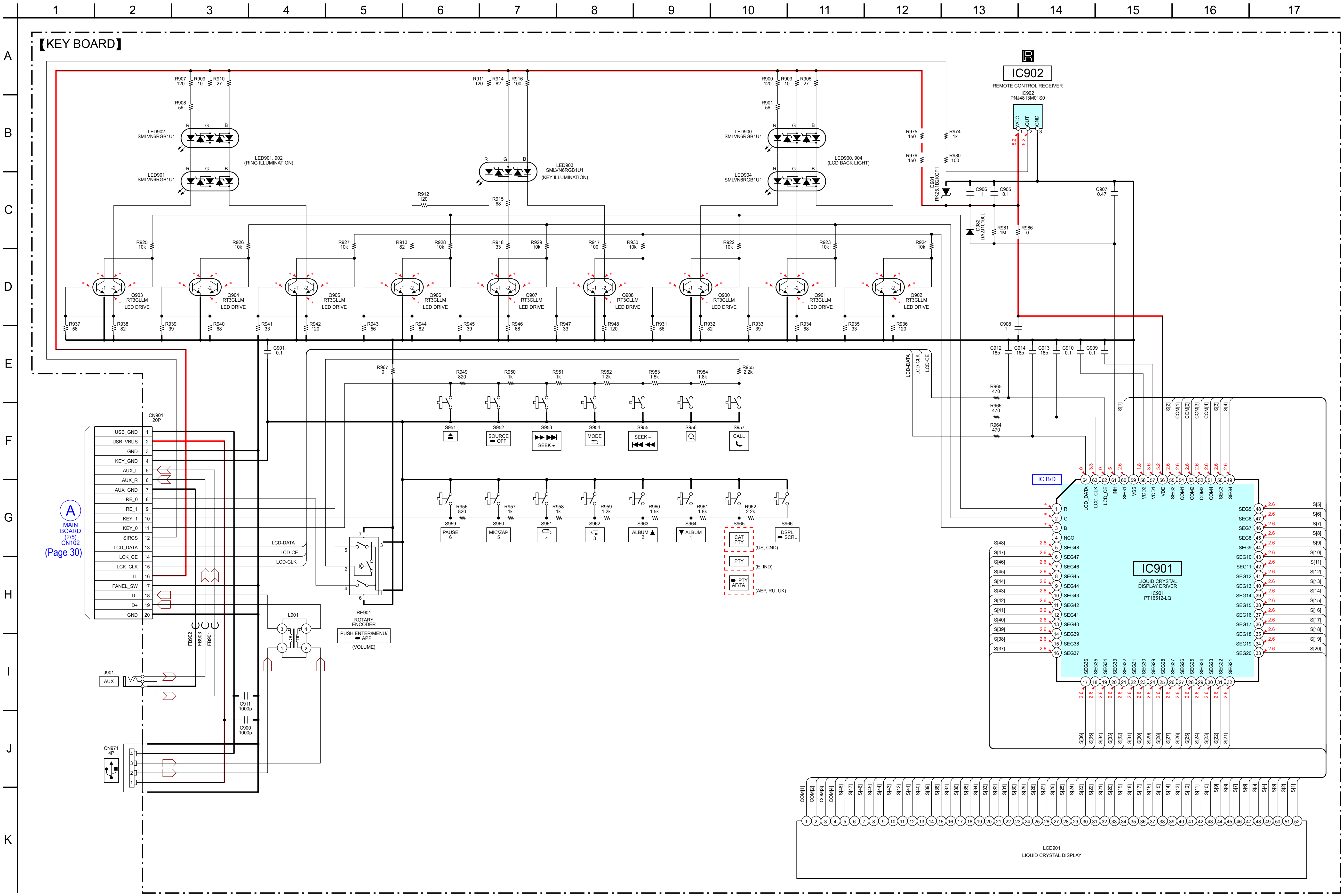
5-12. PRINTED WIRING BOARD - KEY Board (Conductor Side) - • : Uses unleaded solder.



Note: Refer to the servicing notes "NOTE FOR REPLACEMENT OF THE USB CONNECTOR (CN971) AND THE AUX JACK (J901)" on page 6, if replacing CN971 and J901.

5-13. SCHEMATIC DIAGRAM - KEY Board -

• See page 39 for IC Block Diagrams.

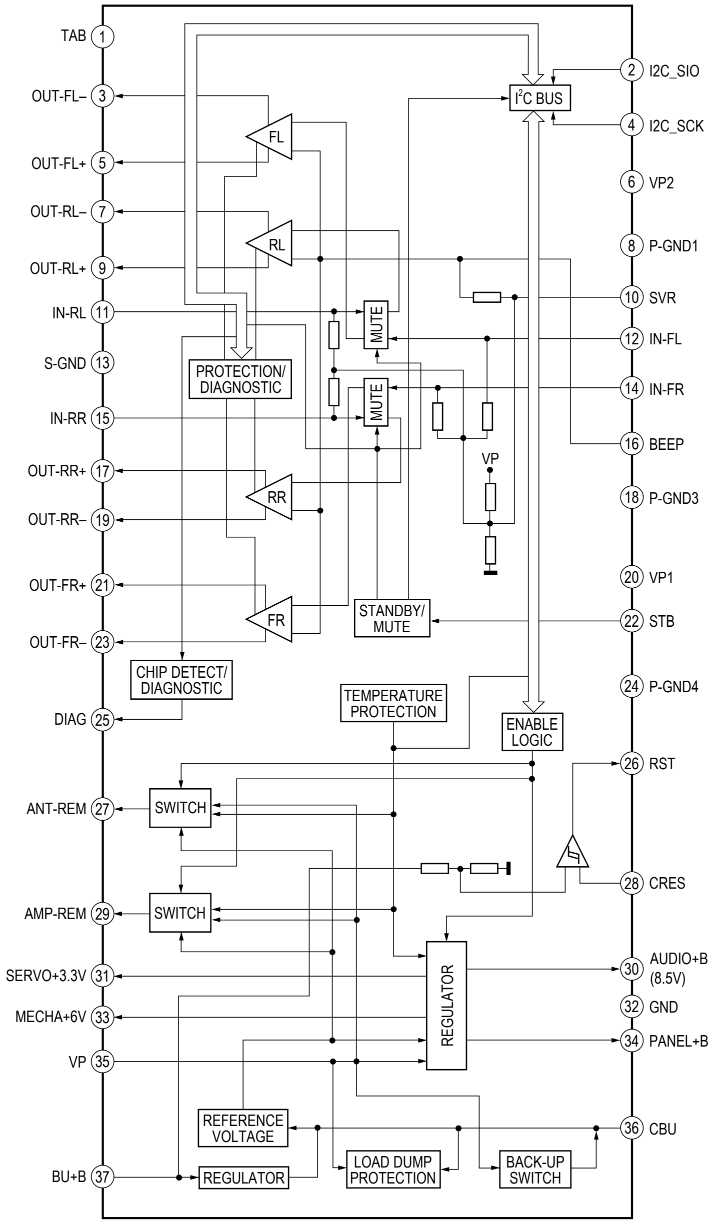


Note: Refer to the servicing notes "NOTE FOR REPLACEMENT OF THE USB CONNECTOR (CN971) AND THE AUX JACK (J901)" on page 6, if replacing CN971 and J901.

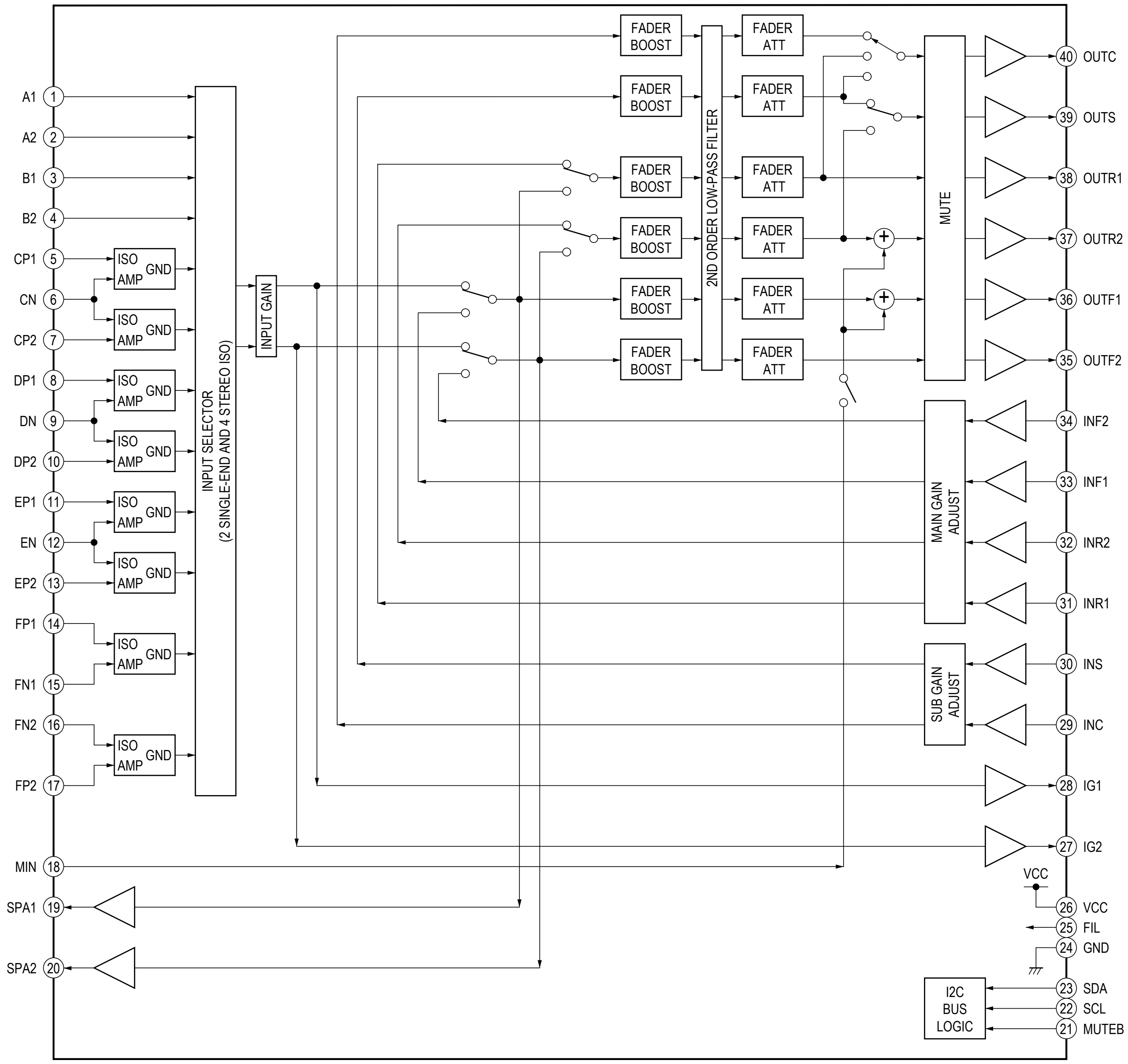
- **IC Block Diagrams**

– MAIN Board –

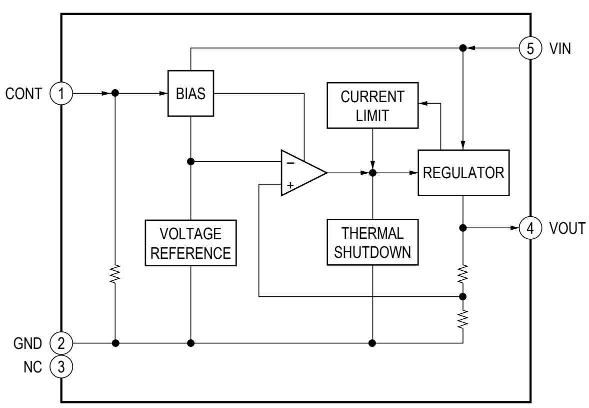
IC301 TDF8556AJ/N5



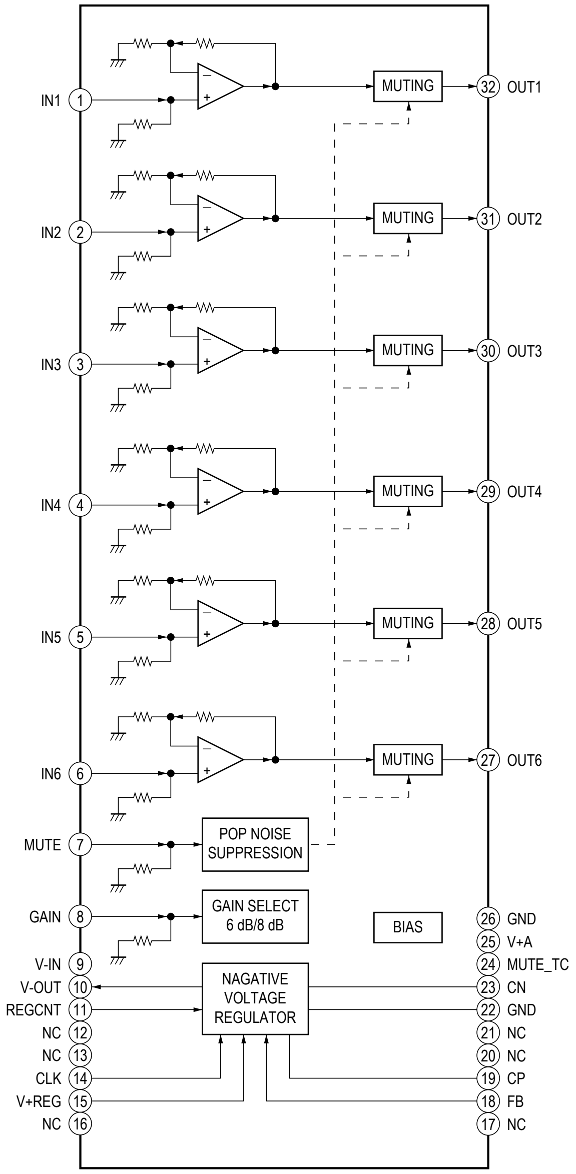
IC401 BD3467FV-E2



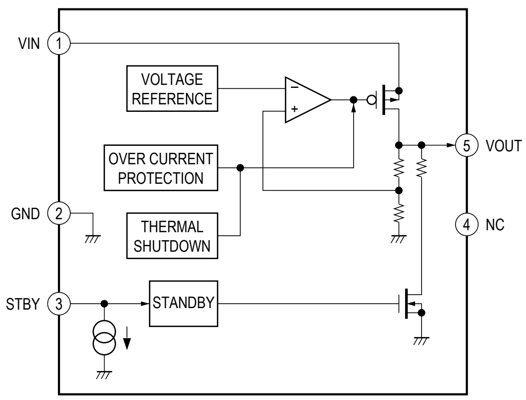
IC402 MM1886A33NRE



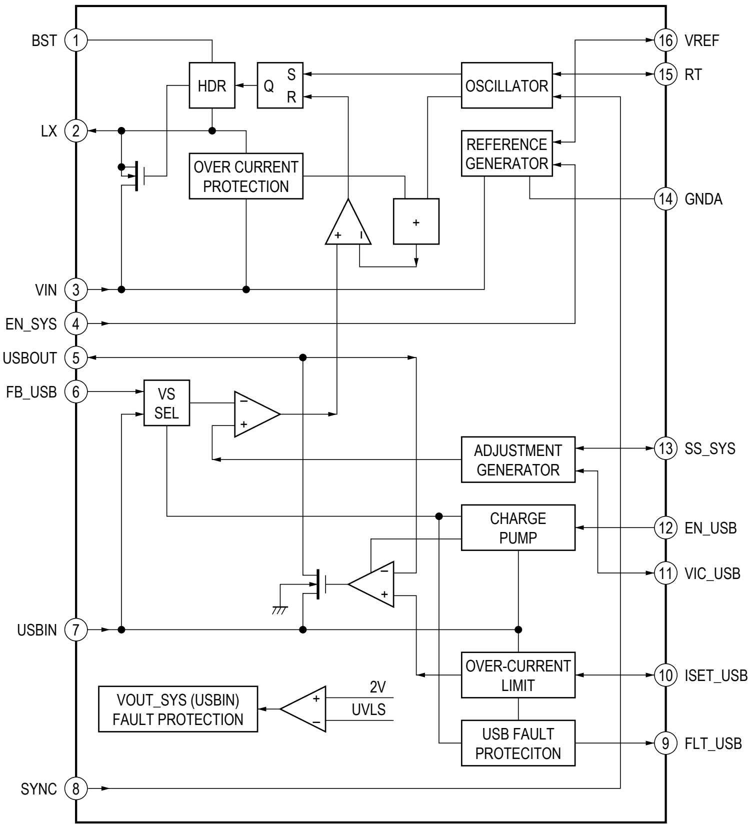
IC404 NJW1240V (TE2)



IC603 BU33TD3WG-TR
IC681, 682 BU15TD3WG-TR

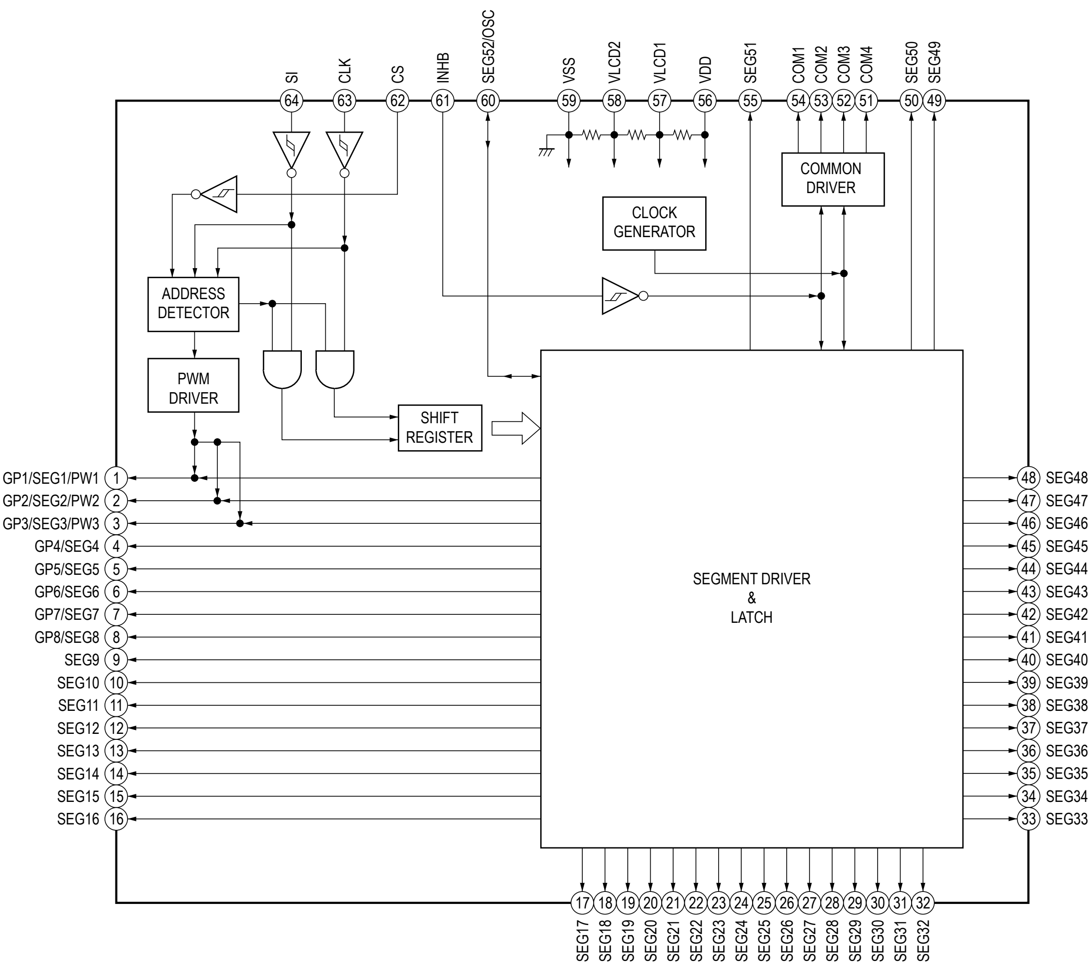


IC1300 OZ539IGN-A1-0-TR



– KEY Board –

IC901 PT16512-LQ



- **IC Pin Function Description**

MAIN BOARD IC501 R5F3650ECDZ98FB (MAIN SYSTEM CONTROLLER) (AEP, Russian, UK, E and Indian models)
IC501 R5F3650KCDZ95FB (MAIN SYSTEM CONTROLLER) (US and Canadian models)

Pin No.	Pin Name	I/O	Description
1	NOSE_SW	I	Front panel remove/attach detection signal input terminal Fixed at "L" in this unit
2	SIRCS	I	Remote control signal input from the remote control signal receiver
3	UNISO	-	Not used
4	UNISI	-	Not used
5	UNISCK	-	Not used
6	BYTE	I	External data bus width select signal input Connect to VSS in this unit
7	CNVSS	I	Flash write signal input terminal Normally operation: "L", Flash write: "H"
8	XIN	I	Low speed operation clock signal input terminal (32.768 kHz)
9	XOUT	O	Low speed operation clock signal output terminal (32.768 kHz)
10	RESET	I	System reset signal input terminal Not used
11	OSCOUT	O	High speed operation clock signal output terminal (7.92 MHz)
12	VSS	-	Ground terminal
13	OSCIN	I	High speed operation clock signal input terminal (7.92 MHz)
14	VCC1	-	Power supply terminal (+3.3V)
15	NMI	I	Non-maskable interrupt signal input terminal Fixed at "H" in this unit
16	MEC_SELFSW	I	Detection signal input from the CD section (self switch)
17	BUIN	I	Back up power supply detection signal input terminal "L" is input at low voltage
18	NCO	-	Not used
19	RC_IN1	I	Rotary remote commander shift key input terminal
20	MC_RX	I	Serial data input from the sub system controller
21	NCO	-	Not used
22	MC_TX	O	Serial data output to the sub system controller
23	NCO	-	Not used
24	SYNC_OUT	O	Synchronize signal output to the DC/DC converter (US, Canadian, AEP, Russian and UK models) Synchronize signal output to the line amplifier and DC/DC converter (E and Indian models)
25	SYNC_PRE5V_ON	-	Not used
26	BEEP	O	Beep sound drive signal output to the power amplifier
27	I2C_SCK	O	IIC serial clock signal output terminal
28	I2C_SIO	I/O	IIC two-way serial data bus terminal
29	FW_TXD	O	Flash writer data output terminal
30	FW_RXD	I	Flash writer data input terminal
31	FW_CLK	I	Flash writer clock signal output terminal
32	FW_BUSY	O	Flash writer busy signal output terminal
33	XM_TX	O	Serial data output to the SIRIUSXM IN connector (US and Canadian models only)
34	XM_RX	I	Serial data input from the SIRIUSXM IN connector (US and Canadian models only)
35	XM_POWER_EN	O	Power supply on/off control signal output to the SIRIUSXM IN connector (US and Canadian models only)
36 to 38	NCO	-	Not used
39	EPM	O	EPM signal output terminal Fixed at "L" in this unit
40	NCO	-	Not used
41	MEC_LOAD	O	Motor (Loading) signal output to the CD section
42	MEC_EJECT	O	Motor (Eject) signal output to the CD section
43	NCO	-	Not used
44	CE	I	Chip enable signal input terminal Fixed at "H" in this unit
45	HIT2_DATA	I/O	IIC two-way serial data bus with the tuner unit
46	HIT2_SCL	O	IIC serial clock signal output to the tuner unit
47	HIT2_RESET	O	Reset signal output to the tuner unit "L": reset
48 to 50	NCO	-	Not used
51	EN_SYS	O	Power supply on/off control signal output to the DC/DC converter
52	IPOD	-	Not used
53, 54	NCO	-	Not used
55	ACC_IN	I	Accessory power detection signal input terminal "L": accessory power on
56	ATT	O	Muting on/off control signal output terminal "H": muting on
57	DIAG	I	Diagnostic signal input from the power amplifier

Pin No.	Pin Name	I/O	Description
58	AMPSTB	O	Standby control signal output to the power amplifier
59	GHOST_RST	O	Reset signal output to the sub system controller "L": reset
60	VCC2	-	Power supply terminal (+3.3V)
61	GHOST_1_5V	-	Not used
62	VSS	-	Ground terminal
63	DSP_RST	O	Reset signal output to the audio DSP "L": reset
64	DSP_SSTBY	O	SRAM standby mode control signal output to the audio DSP
65	DSP_1_5V	O	Power supply on/off control signal output terminal for the audio DSP "H": power on
66	NCO	-	Not used
67	GHOST_3_3V	O	Power supply on/off control signal output terminal for the sub system controller
68	MEC_INSW	I	Detection signal input from the CD section (in switch)
69	MEC_DSW	I	Detection signal input from the CD section (D switch)
70	NCO	-	Not used
71	CD_XRST	I	Reset request signal input from the sub system controller "L": reset
72	MD_MUTE_IN	I	Muting request signal input from the sub system controller "H": muting on
73	BT_MUTE_IN	I	Bluetooth audio muting request signal input from the Bluetooth section "H": muting on
74	MUTE_PRE4V	O	Muting on/off control signal output to the line amplifier "L": muting on (E and Indian models only)
75	MECON_CHECK	I	Power supply voltage detection terminal for CD mechanism section
76	DEBUG_3	-	Not used
77	DEBUG_1	-	Not used
78	DEBUG_2	-	Not used
79, 80	RE-IN1, RE-IN0	I	Jog dial pulse input from the rotary encoder
81	RE_ON	O	Jog dial pulse pull-up signal output terminal
82	RE_ON (RESERVE)	-	Not used
83 to 85	NCO	-	Not used
86	NA	-	Not apply
87, 88	NCO	-	Not used
89, 90	KEYACK0, KEYACK1	I	Acknowledge signal (wake up signal) input terminal
91	NCO	-	Not used
92, 93	KEYIN1, KEYIN0	I	Front panel key input terminal
94	AVSS	-	Ground terminal (for A/D converter)
95	RC_IN0	I	Rotary remote commander shift key input terminal
96	AVRH	I	Reference voltage (+3.3V) input terminal (for A/D converter)
97	AVDD	-	Power supply terminal (+3.3V) (for A/D converter)
98	NCO	-	Not used
99	DOWNLD_DET	I	Serial flash downloader status detection signal input terminal
100	BT_MIC_POWER	O	Power supply on/off control signal output terminal for the Bluetooth microphone "H": power on

MAIN BOARD IC601 TMPM320C1DFG-9999 (SUB SYSTEM CONTROLLER)

Pin No.	Pin Name	I/O	Description
1	MODE1	I	Operation mode setting terminal Fixed at “L” in this unit
2	RESETn	I	Reset signal input terminal from the main system controller
3	DRV_ON	O	Driver control signal output to the CD section
4	BSIF_INT	I	Request signal input from the audio DSP
5	DEC_INT	I	Request signal input from the audio DSP
6	(DOOR_SW)	-	Not used
7	MEC_LIMIT	I	Detection signal input from the CD section (limit switch)
8	CD_XRST	O	Reset request signal output to the main system controller “L”: reset
9	DEC_XMUTE	O	Muting on/off control signal output to the audio DSP
10	SF_WP	O	Write protect signal output to the serial flash
11	SF_HOLD	O	Hold signal output to the serial flash
12	DVCC3.3IO	-	Power supply terminal (+3.3V)
13	DVSSCOM	-	Ground terminal
14	SP_CLK	O	Spectrum analyzer data transfer clock signal output to the audio DSP
15	SP_DATA	I	Spectrum analyzer data input from the audio DSP
16	CD_ZDET	I	Zero detection signal input from the audio DSP
17	A-ATT	O	Muting on/off control signal output to the main system controller
18	SF_SO	O	Serial data output to the serial flash
19	SF_SI	I	Serial data input from the serial flash
20	SF_CE	O	Chip enable signal output to the serial flash
21	SF_CLK	O	Serial data transfer clock signal output to the serial flash
22	BSIF_DATA	O	Audio data output to the audio DSP
23	BSIF_GATE	O	Gate signal output to the audio DSP
24	BSIF_LRCK	O	L/R sampling clock signal output to the audio DSP
25	BSIF_BCK	O	Bit clock signal output to the audio DSP
26	LCD_DO	O	Serial data output to the liquid crystal display driver
27	ILL_IN	I	Illuminate line detect signal input terminal
28	LCD_CE	O	Chip enable signal output to the liquid crystal display driver
29	LCD_CLK	O	Serial data transfer clock signal output to the liquid crystal display driver
30	DVCC3.3IO	-	Power supply terminal (+3.3V)
31	DVSSCOM	-	Ground terminal
32	DVCC1.2DRM	-	Power supply terminal (+1.2V)
33	DVCC1.2DRM	-	Power supply terminal (+1.2V)
34	DVSSCOM	-	Ground terminal
35	SWDCK	O	Debug terminal (for ICE) Not used
36	SWDIO	I/O	Debug terminal (for ICE) Not used
37 to 40	CD_BUS0 to CD_BUS3	O	Serial data output to the audio DSP
41	CD_BUCK	O	Serial data transfer clock signal output to the audio DSP
42	DVCC33IO	-	Power supply terminal (+3.3V)
43	DVCC3.3DRM	-	Power supply terminal (+3.3V)
44	DVSSCOM	-	Ground terminal
45	CD_XCCE	O	Chip enable signal output to the audio DSP
46	USB_EN	-	Not used
47	CP_SEL	I	EEPROM setting terminal “H”: EEPROM use
48	DVCC1.2	-	Power supply terminal (+1.2V)
49	BT_TX	O	Serial transmit data output to the Bluetooth section
50	BT_RX	I	Serial receive data input from the Bluetooth section
51	BT_CTS	I	Clear to send signal input from the Bluetooth section
52	BT_RTS	O	Return to send signal output to the Bluetooth section
53	DVSS_COM	-	Ground terminal
54	BT_POWER	O	Power on/off control signal output terminal for the Bluetooth section “H”: power on
55	BT_RESET	O	Reset signal output to the Bluetooth section “L”: reset
56	BT_MIC_DET	I	Microphone detection signal input terminal “L”: microphone is connected
57	CP_RESET	O	Reset signal output terminal Not used
58	MC_TX	O	Serial data output to the main system controller
59	MC_RX	I	Serial data input from the main system controller
60	I2C_SCL	O	Serial data transfer clock signal output to the EEPROM

Pin No.	Pin Name	I/O	Description
61	I2C_SDA	I/O	Two-way data bus with the EEPROM
62	DVCC1.2	-	Power supply terminal (+1.2V)
63 to 68	D0 to D5	I/O	Two-way data bus terminal Not used
69	DVSSCOM	-	Ground terminal
70	D6	I/O	Two-way data bus terminal Not used
71	DVCC3.3IO	-	Power supply terminal (+3.3V)
72 to 80	D7 to D15	I/O	Two-way data bus terminal Not used
81, 82	A0, A1	O	Address signal output terminal Not used
83	DVSSCOM	-	Ground terminal
84 to 86	A2 to A4	O	Address signal output terminal Not used
87	DVCC1.2	-	Power supply terminal (+1.2V)
88	DVCC3.3IO	-	Power supply terminal (+3.3V)
89 to 97	A5 to A13	O	Address signal output terminal Not used
98	DVSSCOM	-	Ground terminal
99 to 103	A14 to A18	O	Address signal output terminal Not used
104	DVCC3.3IO	-	Power supply terminal (+3.3V)
105 to 108	DT10_DATA1 to DT10_DATA4	-	Not used
109	OE	O	Output enable signal output Not used
110	WE	O	Write enable signal output Not used
111	DT10_CLK	-	Not used
112	DT10_CE	-	Not used
113	DOWNLD_DET	O	Serial flash downloader status detection signal output terminal
114	NCO	-	Not used
115	USB1_OVR	I	USB over current detection signal input from the DC/DC converter “L”: over current
116	USB1_ON	O	Power supply on/off control signal output to the DC/DC converter “H”: power on
117	DVCC1.2	-	Power supply terminal (+1.2V)
118	DVSSCOM	-	Ground terminal
119	DVSSPULL	-	Ground terminal
120	DVCC1.2PULL	-	Power supply terminal (+1.2V)
121	DVCC1.2	-	Power supply terminal (+1.2V)
122	DVSSCOM	-	Ground terminal
123	AVDD3.3USB	-	Power supply terminal (+3.3V)
124	AVSS3.3USB	-	Ground terminal
125	DP	I/O	Two-way USB data (positive) with the USB connector
126	TXRTUNE	I	External resistor connection terminal for USB
127	DM	I/O	Two-way USB data (negative) with the USB connector
128	AVSS3.3USB	-	Ground terminal
129	AVDD3.3USB	-	Power supply terminal (+3.3V)
130	XO	O	System clock output terminal (12 MHz)
131	AVSS3.3USBC	-	Ground terminal
132	XI	I	System clock input terminal (12 MHz)
133	DVSSUSB	-	Ground terminal
134	DVDD1.2USB	-	Power supply terminal (+1.2V)
135	ANALOGTEST	-	Not used
136	DVSSCOM	-	Ground terminal
137	DVCC1.2	-	Power supply terminal (+1.2V)
138 to 141	(N.C.)	-	Not used
142	AVSSADC	-	Ground terminal
143	AVDD3.3DC	-	Power supply terminal (+3.3V)
144	MODE0	I	Operation mode setting terminal Fixed at “L” in this unit

MAIN BOARD IC701 TC94A99FG-003 (SY, H (CD HEAD AMP, DIGITAL SERVO PROCESSOR, AUDIO DSP)

Pin No.	Pin Name	I/O	Description
1	LPFO	O	Signal output from the operation amplifier for PLL loop filter
2	PVREF	I	Reference voltage (+1.65V) input terminal
3	VCOF	O	Terminal for VCO filter
4	RVSS3	-	Ground terminal
5	VCOI	I	DSP VCO control voltage input terminal
6	RVDD3	-	Power supply terminal (+3.3V)
7	SLCO	O	EFM slice level output terminal
8	RFI	I	RF signal input terminal
9	RFRPI	I	RF ripple signal input terminal
10	RFEQO	O	EFM slice level output terminal
11	DCOFC	O	Not used
12	AGCI	I	RF signal amplitude adjustment amplification input terminal
13	RFO	O	RF signal generation amplification output terminal
14	RVSS3	-	Ground terminal
15	FNI2	I	Main beam input terminal (Connect with pin diode B)
16	FNI1	I	Main beam input terminal (Connect with pin diode C)
17	FPI2	I	Main beam input terminal (Connect with pin diode C)
18	FPI1	I	Main beam input terminal (Connect with pin diode A)
19	VDD1-1	-	Power supply terminal (+1.5V)
20	TPI	I	Sub beam amplification input terminal (Connect with pin diode F)
21	TNI	I	Sub beam amplification input terminal (Connect with pin diode E)
22	VRO	O	Reference voltage (+1.65V) output terminal
23	AVSS3	-	Ground terminal
24	MDI	I	Monitor photo diode amplification input terminal
25	LDO	O	Laser diode amplification output terminal
26	FSMONIT	-	Not used
27	RFZI	I	RF ripple zero crossing signal input terminal
28	RFRP	O	RF ripple signal output terminal
29	TEI	I	Tracking error signal input terminal
30	AVDD3	-	Power supply terminal (+3.3V)
31	FOO	O	Focus servo equalizer signal output terminal
32	TRO	O	Tracking servo equalizer signal output terminal
33	VSS-1	-	Ground terminal
34	FMO	O	Feeding servo equalizer signal output terminal
35	DMO	O	Disc servo equalizer signal output terminal
36	VDDM1	-	Power supply terminal (+1.5V)
37	/SRAMSTB	I	Strobe signal input from the main system controller "L": standby mode
38	VDD1-2	-	Power supply terminal (+1.5V)
39	VDD3-1	-	Power supply terminal (+3.3V)
40 to 50	PIO10 to PIO20	-	Not used
51	DVDD12	-	Power supply terminal (+3.3V)
52	DAO1 (R_R-CH)	O	R_R channel data output terminal
53	DVSS12	-	Ground terminal
54	DAO2 (F_R-CH)	O	F_R channel data output terminal
55	DVREF	-	Reference voltage input terminal
56	DVDD34	-	Power supply terminal (+3.3V)
57	DAO3 (F_L-CH)	O	F_L channel data output terminal
58	DVSS34	-	Ground terminal
59	DAO4 (R_L-CH)	O	R_L channel data output terminal
60	DVDD5	-	Power supply terminal (+3.3V)
61	DAO5 (SUB-CH)	O	SUB channel data output terminal
62	DVSS5	-	Ground terminal
63	VDD1-3	-	Power supply terminal (+1.5V)
64	VSS-2	-	Ground terminal
65	XVSS3	-	Ground terminal
66	XI	I	System clock input terminal (16.934 MHz)
67	XO	O	System clock output terminal (16.934 MHz)
68	XVDD3	-	Power supply terminal (+3.3V)

Pin No.	Pin Name	I/O	Description
69	ADVDD3	-	Power supply terminal (+3.3V)
70	ADIN1 (IN_L-CH)	I	Audio signal input terminal (L channel)
71	ADVREFL	O	Reference voltage output terminal
72	ADVCM	O	Reference voltage output terminal
73	ADVREFH	O	Reference voltage output terminal
74	ADIN2 (IN_R-CH)	I	Audio signal input terminal (R channel)
75	ADVSS3	-	Ground terminal
76	MS	I	I/F mode selection signal input terminal Fixed at “L” in this unit
77 to 80	CD_BUS0 to CD_BUS3	I	Serial data input from the sub system controller
81	CD_BUCK	I	Serial data transfer clock signal input from the sub system controller
82	CD_XCCE	I	Chip enable signal input from the sub system controller
83	VDD3-2	-	Power supply terminal (+3.3V)
84	VSS-3	-	Ground terminal
85	/RST	I	Reset signal input from the main system controller
86	VDD1-4	-	Power supply terminal (+1.5V)
87	DEC_INT	O	Request signal output to the sub system controller
88	BSIF_INT	O	Request signal output to the sub system controller
89	BSIF_GATE	I	Gate signal input from the sub system controller
90	BSIF_DATA	I	Audio data input from the sub system controller
91	BSIF_BCK	I	Bit clock signal input from the sub system controller
92	BSIF_LRCK	I	L/R sampling clock signal (44.1 kHz) input terminal for audio data input
93	DEC_XMUTE	I	Muting on/off control signal input from the sub system controller
94	ZDET	O	Zero detection signal output terminal
95	SP_DATA	O	Spectrum analyzer data output to the sub system controller
96	SP_CLK	I	Spectrum analyzer data transfer clock signal input from the sub system controller
97	TEST	I	Setting terminal for test mode Normally fixed at “L”
98	PDO	O	Phase error margin signal between EFM signal and PLCK signal output terminal
99	TMAX	O	TMAX detection result output terminal
100	LPFN	I	Inverted signal input from the operation amplifier for PLL loop filter

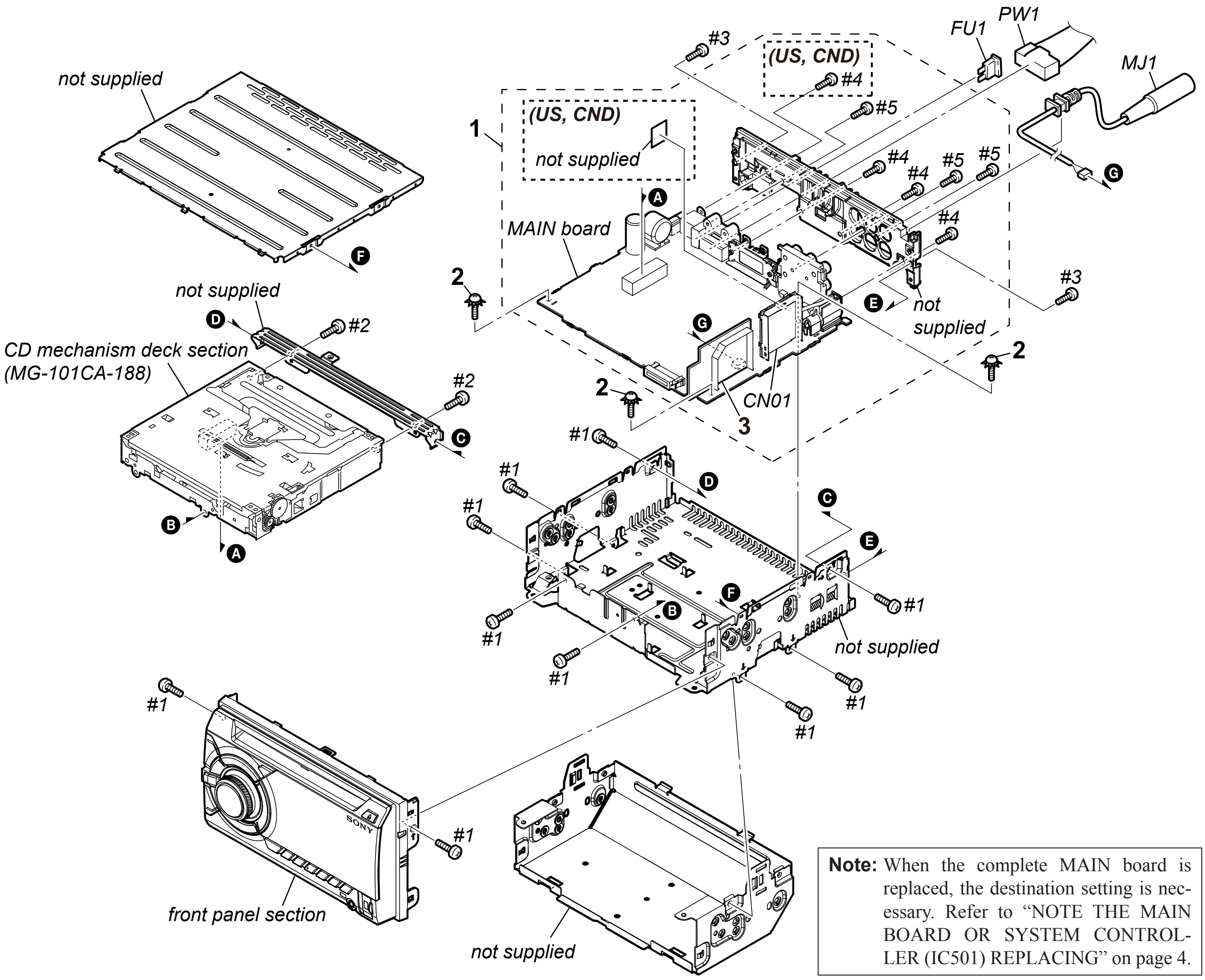
SECTION 6
EXPLODED VIEWS

Note:
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Color Indication of Appearance Parts Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ Parts Color ↑ Cabinet's Color
- Abbreviation
  CND : Canadian model
  IND : Indian model
  RU : Russian model

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

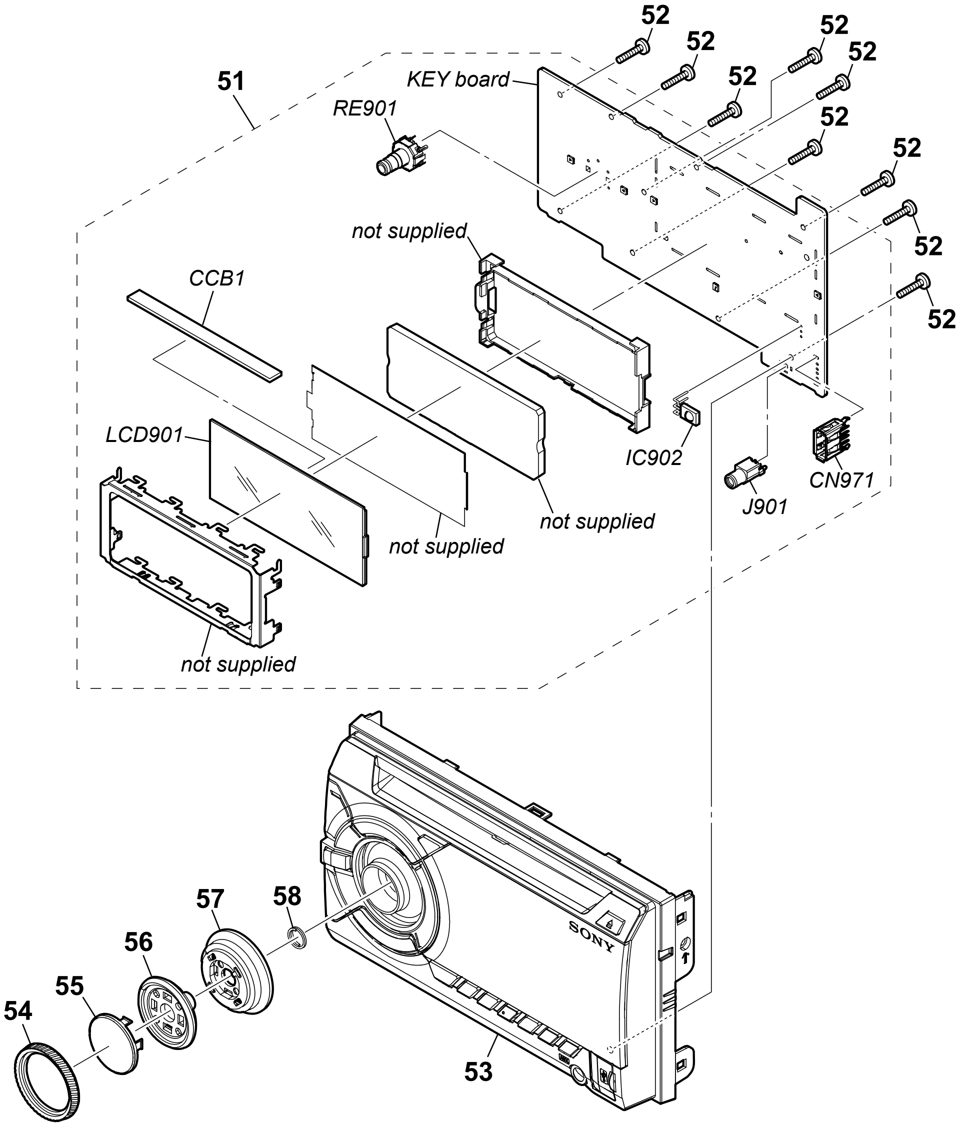
6-1. MAIN SECTION



Note: When the complete MAIN board is replaced, the destination setting is necessary. Refer to "NOTE THE MAIN BOARD OR SYSTEM CONTROLLER (IC501) REPLACING" on page 4.

Ref. No.	Part No.	Description	Remark
1	A-1896-828-A	MAIN BOARD, COMPLETE (Including BT board)	(E, IND)
1	A-1896-829-A	MAIN BOARD, COMPLETE (Including BT board)	(US, CND)
1	A-1896-831-A	MAIN BOARD, COMPLETE (Including BT board)	(RU)
1	A-1904-358-A	MAIN BOARD, COMPLETE (Including BT board)	(AEP, UK)
2	4-410-504-01	SCREW (+PTT 2.6X6), GROUND POINT	
3	A-1888-219-A	BT BOARD, COMPLETE (Included in MAIN board)	
CN01	A-1878-198-A	TUX-DSP02 (TUNER UNIT)	
FU1	1-523-227-11	MINI FUSE (BLADE TYPE) (10 A/32 V)	
MJ1	1-846-310-11	CABLE, CONNECTION (MIC) (MIC IN)	
PW1	1-846-033-11	CONNECTION CABLE (ISO) (POWER)	(AEP, RU, UK)
PW1	1-846-037-11	CONNECTION CABLE, AUTOMOBILE (POWER)	(US, CND, E, IND)
#1	7-685-792-09	SCREW +PTT 2.6X6 (S)	
#2	7-685-790-01	SCREW +PTT 2.6X4 (S)	
#3	7-685-793-01	SCREW +PTT 2.6X8 (S)	
#4	7-685-794-01	SCREW +PTT 2.6X10 (S)	
#5	7-685-134-19	SCREW +P 2.6X8 TYPE2 NON-SLIT	

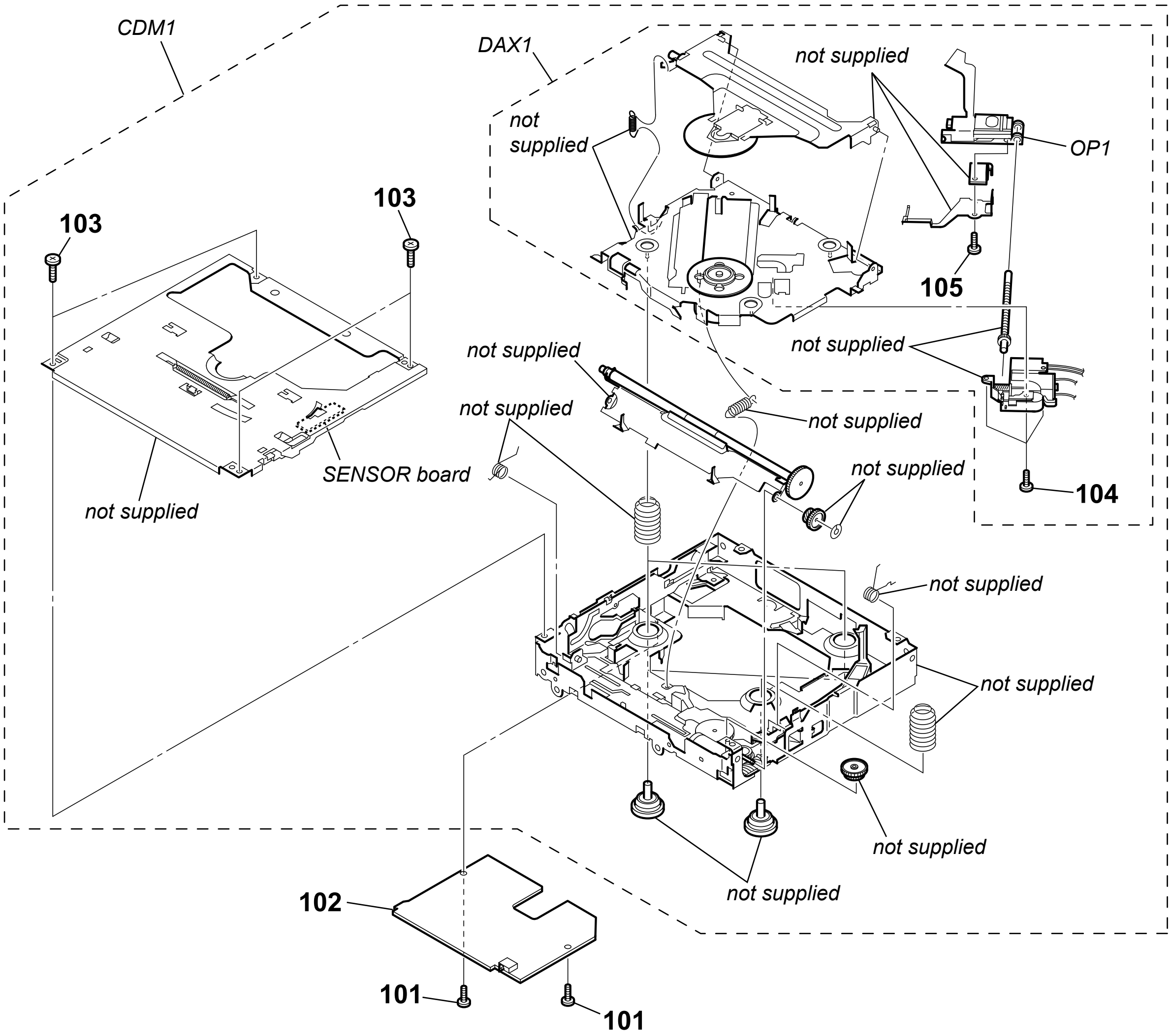
6-2. FRONT PANEL SECTION



Note: Refer to the servicing notes "NOTE FOR REPLACEMENT OF THE USB CONNECTOR (CN971) AND THE AUX JACK (J901)" on page 6, if replacing CN971 and J901.

Ref. No.	Part No.	Description	Remark
51	A-1896-840-A	KEY BOARD, COMPLETE	
52	3-250-543-02	SCREW (+B P-TITE M2)	
53	X-2586-283-1	PANEL FRONT (SV) ASSY (IND)	
53	X-2586-284-1	PANEL FRONT (SV) ASSY (US, CND)	
53	X-2586-285-1	PANEL FRONT (SV) ASSY (E)	
53	X-2586-286-1	PANEL FRONT (SV) ASSY (RU)	
53	X-2586-287-1	PANEL FRONT (SV) ASSY (AEP, UK)	
54	4-435-278-01	RUBBER (KNOB)	
55	4-435-277-01	KNOB (TOP)	
56	4-435-276-01	KNOB	
57	4-435-301-02	LIGHT GUIDE (RING)	
58	4-447-826-01	SPRING (VOL)	
CCB1	1-780-968-11	CONDUCTIVE BOARD, CONNECTION	
CN971	1-822-798-11	USB CONNECTOR (ψ)	
IC902	6-600-806-01	IC PNJ4813M01S0 (R)	
J901	1-842-936-12	JACK (SMALL TYPE) (DIA. 3.5) (AUX)	
LCD901	1-811-702-11	DISPLAY PANEL, LIQUID CRYSTAL	
RE901	1-490-863-11	ROTARY ENCODER (PUSH ENTER/MENU/▬ APP (VOLUME))	

6-3. CD MECHANISM DECK SECTION (MG-101CA-188)



Ref. No.	Part No.	Description	Remark
101	3-352-758-31	SCREW (M1.7X2.5), TOOTHED LOCK	
102	A-1866-089-A	SERVO BOARD, COMPLETE	
103	2-134-636-71	SCREW (M1.7X2.5)	
104	2-626-869-31	SCREW (M2X3), SERRATION	
105	3-686-458-21	SCREW (P1.4), TAPPING	

Ref. No.	Part No.	Description	Remark
CDM1	A-1866-801-A	MECHANICAL BLOCK (11CA) ASSY (US, CND, AEP, RU, UK, E)	
CDM1	A-1922-404-A	MECHANICAL BLOCK (11CA2) ASSY (IND)	
⚠ DAX1	A-1284-705-A	DAXEV08	
⚠ OP1	X-2149-672-1	OPTICAL PICK-UP (DAX-25A) (for SERVICE)	

BT KEY

SECTION 7
ELECTRICAL PARTS LIST

Note:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- RESISTORS
  All resistors are in ohms.
  METAL: Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F: nonflammable
- CAPACITORS
  uF: μF
- COILS
  uH: μH
- SEMICONDUCTORS
  In each case, u: μ, for example:
  uA. . : μA. . , uPA. . , μPA. . ,
  uPB. . : μPB. . , uPC. . , μPC. . ,
  uPD. . : μPD. .
- Abbreviation
  CND : Canadian model
  IND : Indian model
  RU : Russian model

When indicating parts by reference number, please include the board name.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark
	A-1888-219-A	BT BOARD, COMPLETE (Included in MAIN board)	
		******************	

When the BT board is defective, exchange the complete mounted board.
****

Ref. No.	Part No.	Description				Remark
	A-1896-840-A	KEY BOARD, COMPLETE				
		*******************				
		< CAPACITOR >				
C900	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	
C901	1-100-597-91	CERAMIC CHIP	0.1uF	10%	25V	
C905	1-100-597-91	CERAMIC CHIP	0.1uF	10%	25V	
C906	1-165-908-11	CERAMIC CHIP	1uF	10%	10V	
C907	1-125-891-11	CERAMIC CHIP	0.47uF	10%	10V	
C908	1-165-908-11	CERAMIC CHIP	1uF	10%	10V	
C909	1-100-597-91	CERAMIC CHIP	0.1uF	10%	25V	
C910	1-100-597-91	CERAMIC CHIP	0.1uF	10%	25V	
C911	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	
C912	1-162-918-11	CERAMIC CHIP	18PF	5%	50V	
C913	1-162-918-11	CERAMIC CHIP	18PF	5%	50V	
C914	1-162-918-11	CERAMIC CHIP	18PF	5%	50V	
		< CONNECTION CONDUCTIVE BOARD >				
CCB1	1-780-968-11	CONDUCTIVE BOARD, CONNECTION				
		< CONNECTOR >				
CN901	1-842-265-22	PLUG, CONNECTOR 20P				
CN971	1-822-798-11	USB CONNECTOR (⚠)				
		< DIODE >				
D981	6-503-202-01	DIODE RKZ5.1B2KGP1				
D982	6-502-961-01	DIODE DA2J10100L				
		< FERRITE BEAD >				
FB901	1-500-113-22	BEAD, FERRITE (CHIP) (1608)				
FB902	1-500-113-22	BEAD, FERRITE (CHIP) (1608)				
FB903	1-500-113-22	BEAD, FERRITE (CHIP) (1608)				
		< IC >				
IC901	6-718-828-02	IC PT16512-LQ				
IC902	6-600-806-01	IC PNJ4813M01S0 (R)				
		< JACK >				
J901	1-842-936-12	JACK (SMALL TYPE) (DIA. 3.5) (AUX)				

Ref. No.	Part No.	Description				Remark
		< COIL >				
L901	1-457-223-11	COMMON MODE CHOKE COIL				
		< LIQUID CRYSTAL DISPLAY >				
LCD901	1-811-702-11	DISPLAY PANEL, LIQUID CRYSTAL				
		< LED >				
LED900	6-503-871-01	LED SMLVN6RGB1U1 (LCD BACK LIGHT)				
LED901	6-503-871-01	LED SMLVN6RGB1U1 (RING ILLUMINATION)				
LED902	6-503-871-01	LED SMLVN6RGB1U1 (RING ILLUMINATION)				
LED903	6-503-871-01	LED SMLVN6RGB1U1 (KEY ILLUMINATION)				
LED904	6-503-871-01	LED SMLVN6RGB1U1 (LCD BACK LIGHT)				
		< TRANSISTOR >				
Q900	6-551-272-01	TRANSISTOR	RT3CLLM			
Q901	6-551-272-01	TRANSISTOR	RT3CLLM			
Q902	6-551-272-01	TRANSISTOR	RT3CLLM			
Q903	6-551-272-01	TRANSISTOR	RT3CLLM			
Q904	6-551-272-01	TRANSISTOR	RT3CLLM			
Q905	6-551-272-01	TRANSISTOR	RT3CLLM			
Q906	6-551-272-01	TRANSISTOR	RT3CLLM			
Q907	6-551-272-01	TRANSISTOR	RT3CLLM			
Q908	6-551-272-01	TRANSISTOR	RT3CLLM			
		< RESISTOR >				
R900	1-216-810-11	METAL CHIP	120	5%	1/10W	
R901	1-216-806-11	METAL CHIP	56	5%	1/10W	
R903	1-216-797-11	METAL CHIP	10	5%	1/10W	
R905	1-216-802-11	METAL CHIP	27	5%	1/10W	
R907	1-216-810-11	METAL CHIP	120	5%	1/10W	
R908	1-216-806-11	METAL CHIP	56	5%	1/10W	
R909	1-216-797-11	METAL CHIP	10	5%	1/10W	
R910	1-216-802-11	METAL CHIP	27	5%	1/10W	
R911	1-216-810-11	METAL CHIP	120	5%	1/10W	
R912	1-216-810-11	METAL CHIP	120	5%	1/10W	
R913	1-216-808-11	METAL CHIP	82	5%	1/10W	
R914	1-216-808-11	METAL CHIP	82	5%	1/10W	
R915	1-216-807-11	METAL CHIP	68	5%	1/10W	
R916	1-216-809-11	METAL CHIP	100	5%	1/10W	
R917	1-216-809-11	METAL CHIP	100	5%	1/10W	
R918	1-216-803-11	METAL CHIP	33	5%	1/10W	
R922	1-216-833-11	METAL CHIP	10K	5%	1/10W	
R923	1-216-833-11	METAL CHIP	10K	5%	1/10W	
R924	1-216-833-11	METAL CHIP	10K	5%	1/10W	
R925	1-216-833-11	METAL CHIP	10K	5%	1/10W	

Note 1: When the complete BT board is replaced, it is necessary to confirm operation. Refer to "BLUETOOTH FUNCTION CHECKING METHOD USING A CELLULAR PHONE" on page 8.

Note 2: Refer to the servicing notes "NOTE FOR REPLACEMENT OF THE USB CONNECTOR (CN971) AND THE AUX JACK (J901)" on page 6, if replacing CN971 and J901.

Ref. No.	Part No.	Description			Remark
R926	1-216-833-11	METAL CHIP	10K	5%	1/10W
R927	1-216-833-11	METAL CHIP	10K	5%	1/10W
R928	1-216-833-11	METAL CHIP	10K	5%	1/10W
R929	1-216-833-11	METAL CHIP	10K	5%	1/10W
R930	1-216-833-11	METAL CHIP	10K	5%	1/10W
R931	1-216-806-11	METAL CHIP	56	5%	1/10W
R932	1-216-808-11	METAL CHIP	82	5%	1/10W
R933	1-216-804-11	METAL CHIP	39	5%	1/10W
R934	1-216-807-11	METAL CHIP	68	5%	1/10W
R935	1-216-803-11	METAL CHIP	33	5%	1/10W
R936	1-216-810-11	METAL CHIP	120	5%	1/10W
R937	1-216-806-11	METAL CHIP	56	5%	1/10W
R938	1-216-808-11	METAL CHIP	82	5%	1/10W
R939	1-216-804-11	METAL CHIP	39	5%	1/10W
R940	1-216-807-11	METAL CHIP	68	5%	1/10W
R941	1-216-803-11	METAL CHIP	33	5%	1/10W
R942	1-216-810-11	METAL CHIP	120	5%	1/10W
R943	1-216-806-11	METAL CHIP	56	5%	1/10W
R944	1-216-808-11	METAL CHIP	82	5%	1/10W
R945	1-216-804-11	METAL CHIP	39	5%	1/10W
R946	1-216-807-11	METAL CHIP	68	5%	1/10W
R947	1-216-803-11	METAL CHIP	33	5%	1/10W
R948	1-216-810-11	METAL CHIP	120	5%	1/10W
R949	1-216-820-11	METAL CHIP	820	5%	1/10W
R950	1-216-821-11	METAL CHIP	1K	5%	1/10W
R951	1-216-821-11	METAL CHIP	1K	5%	1/10W
R952	1-216-822-11	METAL CHIP	1.2K	5%	1/10W
R953	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R954	1-216-824-11	METAL CHIP	1.8K	5%	1/10W
R955	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R956	1-216-820-11	METAL CHIP	820	5%	1/10W
R957	1-216-821-11	METAL CHIP	1K	5%	1/10W
R958	1-216-821-11	METAL CHIP	1K	5%	1/10W
R959	1-216-822-11	METAL CHIP	1.2K	5%	1/10W
R960	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R961	1-216-824-11	METAL CHIP	1.8K	5%	1/10W
R962	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R964	1-216-817-11	METAL CHIP	470	5%	1/10W
R965	1-216-817-11	METAL CHIP	470	5%	1/10W
R966	1-216-817-11	METAL CHIP	470	5%	1/10W
R967	1-216-295-91	SHORT CHIP	0		
R974	1-216-821-11	METAL CHIP	1K	5%	1/10W
R975	1-216-811-11	METAL CHIP	150	5%	1/10W
R976	1-216-811-11	METAL CHIP	150	5%	1/10W
R980	1-216-809-11	METAL CHIP	100	5%	1/10W
R981	1-216-857-11	METAL CHIP	1M	5%	1/10W
R986	1-216-864-11	SHORT CHIP	0		
		< ROTARY ENCODER >			
RE901	1-490-863-11	ROTARY ENCODER (PUSH ENTER/MENU/▬ APP (VOLUME))			
		< SWITCH >			
S951	1-798-448-11	TACTILE SWITCH (⏏)			
S952	1-798-448-11	TACTILE SWITCH (SOURCE, ▬ OFF)			
S953	1-798-448-11	TACTILE SWITCH (▶▶ ▶▶|, SEEK +)			
S954	1-798-448-11	TACTILE SWITCH (MODE, ↺)			
S955	1-798-448-11	TACTILE SWITCH (SEEK −, |◀◀ ◀◀)			
S956	1-798-448-11	TACTILE SWITCH (🔍)			
S957	1-798-448-11	TACTILE SWITCH (CALL,)			
S959	1-798-448-11	TACTILE SWITCH (PAUSE, 6)			
S960	1-798-448-11	TACTILE SWITCH (MIC/ZAP, 5)			
S961	1-798-448-11	TACTILE SWITCH (, 4)			
S962	1-798-448-11	TACTILE SWITCH (, 3)			
S963	1-798-448-11	TACTILE SWITCH (ALBUM ▲, 2)			
S964	1-798-448-11	TACTILE SWITCH (▼ ALBUM, 1)			
S965	1-798-448-11	TACTILE SWITCH (CAT, PTY) (US, CND)			
S965	1-798-448-11	TACTILE SWITCH (PTY) (E, IND)			
S965	1-798-448-11	TACTILE SWITCH (▬ PTY, AF/TA) (AEP, RU, UK)			
S966	1-798-448-11	TACTILE SWITCH (DSPL, ▬ SCRL)			

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Ref. No.	Part No.	Description			Remark
	A-1896-828-A	MAIN BOARD, COMPLETE (E, IND)			
	A-1896-829-A	MAIN BOARD, COMPLETE (US, CND)			
	A-1896-831-A	MAIN BOARD, COMPLETE (RU)			
	A-1904-358-A	MAIN BOARD, COMPLETE (AEP, UK)			
		********************			
					(Including BT board)
	7-685-134-19	SCREW +P 2.6X8 TYPE2 NON-SLIT			
	7-685-794-01	SCREW +PTT 2.6X10 (S)			
		< CAPACITOR >			
C10	1-100-591-91	CERAMIC CHIP	1uF	10%	25V
C11	1-137-765-21	ELECT CHIP	47uF	20%	16V
C15	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V
C100	1-114-582-91	CERAMIC CHIP	0.1uF	10%	16V
C101	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C103	1-114-868-11	CERAMIC CHIP	0.1uF	10%	50V
C104	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C105	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C106	1-100-597-91	CERAMIC CHIP	0.1uF	10%	25V
C158	1-116-733-11	CERAMIC CHIP	1uF	10%	25V
C201	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V
C301	1-127-715-11	CERAMIC CHIP	0.22uF	10%	16V
C302	1-116-733-11	CERAMIC CHIP	1uF	10%	25V
C303	1-100-966-91	CERAMIC CHIP	10uF	20%	10V
C305	1-116-733-11	CERAMIC CHIP	1uF	10%	25V
C306	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C307	1-128-394-11	ELECT CHIP	220uF	20%	10V
C308	1-112-863-91	CERAMIC CHIP	0.22uF	10%	10V
C309	1-100-354-21	ELECT CHIP	220uF	20%	6.3V
C311	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C313	1-137-765-21	ELECT CHIP	47uF	20%	16V
C314	1-114-983-91	CERAMIC CHIP	2.2uF	10%	16V
C315	1-112-780-11	CERAMIC CHIP	0.47uF	10%	16V
C317	1-112-780-11	CERAMIC CHIP	0.47uF	10%	16V
C319	1-112-780-11	CERAMIC CHIP	0.47uF	10%	16V
C320	1-100-966-91	CERAMIC CHIP	10uF	20%	10V
C321	1-112-780-11	CERAMIC CHIP	0.47uF	10%	16V
C323	1-164-937-11	CERAMIC CHIP	0.001uF	10%	50V
C324	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C326	1-164-866-11	CERAMIC CHIP	47PF	5%	50V
C327	1-116-733-11	CERAMIC CHIP	1uF	10%	25V
C329	1-128-996-11	ELECT CHIP	4.7uF	20%	50V
C330	1-116-739-11	CERAMIC CHIP	0.47uF	10%	50V
C331	1-116-739-11	CERAMIC CHIP	0.47uF	10%	50V
C334	1-112-839-11	ELECT	4700uF	20%	16V
C335	1-114-868-11	CERAMIC CHIP	0.1uF	10%	50V
C351	1-164-866-11	CERAMIC CHIP	47PF	5%	50V
C352	1-164-866-11	CERAMIC CHIP	47PF	5%	50V

Note 1: When the complete MAIN board is replaced, the destination setting is necessary. Refer to "NOTE THE MAIN BOARD OR SYSTEM CONTROLLER (IC501) REPLACING" on page 4.

Note 2: When the complete MAIN board (including BT board) is replaced, it is necessary to confirm operation. Refer to "BLUETOOTH FUNCTION CHECKING METHOD USING A CELLULAR PHONE" on page 8.

MAIN

Ref. No.	Part No.	Description				Remark
C353	1-164-866-11	CERAMIC CHIP	47PF	5%	50V	
C354	1-164-866-11	CERAMIC CHIP	47PF	5%	50V	
C355	1-164-866-11	CERAMIC CHIP	47PF	5%	50V	
C356	1-164-866-11	CERAMIC CHIP	47PF	5%	50V	
C357	1-164-866-11	CERAMIC CHIP	47PF	5%	50V	
C358	1-162-923-11	CERAMIC CHIP	47PF	5%	50V	
C359	1-164-866-11	CERAMIC CHIP	47PF	5%	50V	
C364	1-162-923-11	CERAMIC CHIP	47PF	5%	50V	
C365	1-162-923-11	CERAMIC CHIP	47PF	5%	50V	
C366	1-162-923-11	CERAMIC CHIP	47PF	5%	50V	
C367	1-162-923-11	CERAMIC CHIP	47PF	5%	50V	
C387	1-128-398-11	ELECT CHIP	220uF	20%	16V	
C398	1-100-905-11	CERAMIC CHIP	0.001uF	10%	50V	
C399	1-100-591-91	CERAMIC CHIP	1uF	10%	25V	
C401	1-114-582-91	CERAMIC CHIP	0.1uF	10%	16V	
C402	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V	
C403	1-100-354-21	ELECT CHIP	220uF	20%	6.3V	
C407	1-100-597-91	CERAMIC CHIP	0.1uF	10%	25V	
C411	1-127-931-21	ELECT CHIP	470uF	20%	16V	
C412	1-162-923-11	CERAMIC CHIP	47PF	5%	50V	
C413	1-124-779-00	ELECT CHIP	10uF	20%	16V	
C414	1-100-597-91	CERAMIC CHIP	0.1uF	10%	25V	
C415	1-116-716-11	CERAMIC CHIP	10uF	10%	16V	
C416	1-128-992-21	ELECT CHIP	47uF	20%	25V	
C419	1-100-966-91	CERAMIC CHIP	10uF	20%	10V	
C420	1-124-779-00	ELECT CHIP	10uF	20%	16V	
C421	1-162-923-11	CERAMIC CHIP	47PF	5%	50V	
C422	1-116-728-11	CERAMIC CHIP	2.2uF	10%	10V	
C423	1-162-923-11	CERAMIC CHIP	47PF	5%	50V	
C424	1-124-779-00	ELECT CHIP	10uF	20%	16V	
C425	1-124-779-00	ELECT CHIP	10uF	20%	16V	
C426	1-162-923-11	CERAMIC CHIP	47PF	5%	50V	
C431	1-165-908-11	CERAMIC CHIP	1uF	10%	10V	
C432	1-165-908-11	CERAMIC CHIP	1uF	10%	10V	
C434	1-165-908-11	CERAMIC CHIP	1uF	10%	10V	
C435	1-165-908-11	CERAMIC CHIP	1uF	10%	10V	
C436	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V	
C437	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V	
C438	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V	
C439	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	
C440	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	
C442	1-100-597-91	CERAMIC CHIP	0.1uF	10%	25V	
C446	1-115-416-11	CERAMIC CHIP	0.001uF	5%	25V	(EXCEPT RU)
C450	1-165-908-11	CERAMIC CHIP	1uF	10%	10V	(US, CND)
C451	1-114-983-91	CERAMIC CHIP	2.2uF	10%	16V	(US, CND)
C452	1-165-908-11	CERAMIC CHIP	1uF	10%	10V	(US, CND)
C457	1-164-937-11	CERAMIC CHIP	0.001uF	10%	50V	
C458	1-165-908-11	CERAMIC CHIP	1uF	10%	10V	(E, IND)
C459	1-165-908-11	CERAMIC CHIP	1uF	10%	10V	(E, IND)
C461	1-165-908-11	CERAMIC CHIP	1uF	10%	10V	(E, IND)
C463	1-165-908-11	CERAMIC CHIP	1uF	10%	10V	(E, IND)
C464	1-100-567-81	CERAMIC CHIP	0.01uF	10%	25V	(E, IND)
C466	1-165-908-11	CERAMIC CHIP	1uF	10%	10V	(E, IND)
C467	1-165-908-11	CERAMIC CHIP	1uF	10%	10V	(E, IND)
C468	1-165-908-11	CERAMIC CHIP	1uF	10%	10V	(E, IND)
C469	1-165-908-11	CERAMIC CHIP	1uF	10%	10V	(E, IND)
C470	1-165-908-11	CERAMIC CHIP	1uF	10%	10V	(E, IND)
C472	1-116-716-11	CERAMIC CHIP	10uF	10%	16V	(E, IND)
C473	1-116-716-11	CERAMIC CHIP	10uF	10%	16V	(E, IND)
C474	1-116-716-11	CERAMIC CHIP	10uF	10%	16V	(E, IND)
C480	1-162-923-11	CERAMIC CHIP	47PF	5%	50V	
C481	1-162-923-11	CERAMIC CHIP	47PF	5%	50V	
C499	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V	
C502	1-164-937-11	CERAMIC CHIP	0.001uF	10%	50V	
C504	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V	
C507	1-164-858-11	CERAMIC CHIP	22PF	5%	50V	
C508	1-164-858-11	CERAMIC CHIP	22PF	5%	50V	
C509	1-164-848-11	CERAMIC CHIP	8PF	0.5PF	50V	
C510	1-165-908-11	CERAMIC CHIP	1uF	10%	10V	
C511	1-164-848-11	CERAMIC CHIP	8PF	0.5PF	50V	
C512	1-164-937-11	CERAMIC CHIP	0.001uF	10%	50V	
C513	1-100-567-81	CERAMIC CHIP	0.01uF	10%	25V	
C514	1-164-937-11	CERAMIC CHIP	0.001uF	10%	50V	
C518	1-119-923-11	CERAMIC CHIP	0.047uF	10%	10V	
C520	1-164-866-11	CERAMIC CHIP	47PF	5%	50V	
C521	1-164-866-11	CERAMIC CHIP	47PF	5%	50V	
C522	1-100-567-81	CERAMIC CHIP	0.01uF	10%	25V	
C523	1-100-567-81	CERAMIC CHIP	0.01uF	10%	25V	
C601	1-164-852-11	CERAMIC CHIP	12PF	5%	50V	
C602	1-164-852-11	CERAMIC CHIP	12PF	5%	50V	
C603	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V	
C605	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V	
C606	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V	
C607	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V	
C608	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V	
C615	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V	
C616	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V	
C617	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V	
C618	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V	
C619	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V	
C620	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V	
C621	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V	
C622	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V	
C623	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V	
C624	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V	
C625	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V	
C627	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V	
C628	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V	
C629	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V	
C662	1-125-891-11	CERAMIC CHIP	0.47uF	10%	10V	
C664	1-125-891-11	CERAMIC CHIP	0.47uF	10%	10V	
C666	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V	
C668	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V	
C686	1-164-937-11	CERAMIC CHIP	0.001uF	10%	50V	
C687	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V	
C688	1-165-884-91	CERAMIC CHIP	2.2uF	10%	6.3V	

Ref. No.	Part No.	Description			Remark
C689	1-165-884-91	CERAMIC CHIP	2.2uF	10%	6.3V
C690	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V
C701	1-100-597-91	CERAMIC CHIP	0.1uF	10%	25V
C702	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C703	1-116-733-11	CERAMIC CHIP	1uF	10%	25V
C704	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C705	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C711	1-100-597-91	CERAMIC CHIP	0.1uF	10%	25V
C712	1-126-208-21	ELECT CHIP	47uF	20%	4V
C713	1-119-923-11	CERAMIC CHIP	0.047uF	10%	10V
C714	1-119-923-11	CERAMIC CHIP	0.047uF	10%	10V
C715	1-164-935-11	CERAMIC CHIP	470PF	10%	50V
C716	1-164-935-11	CERAMIC CHIP	470PF	10%	50V
C717	1-114-582-91	CERAMIC CHIP	0.1uF	10%	16V
C718	1-127-772-81	CERAMIC CHIP	0.033uF	10%	10V
C719	1-164-172-11	CERAMIC CHIP	0.0056uF	10%	25V
C720	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C721	1-114-582-91	CERAMIC CHIP	0.1uF	10%	16V
C722	1-114-582-91	CERAMIC CHIP	0.1uF	10%	16V
C724	1-114-582-91	CERAMIC CHIP	0.1uF	10%	16V
C725	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C726	1-164-940-11	CERAMIC CHIP	0.0033uF	10%	16V
C727	1-164-940-11	CERAMIC CHIP	0.0033uF	10%	16V
C728	1-164-940-11	CERAMIC CHIP	0.0033uF	10%	16V
C729	1-164-940-11	CERAMIC CHIP	0.0033uF	10%	16V
C730	1-164-940-11	CERAMIC CHIP	0.0033uF	10%	16V
C732	1-164-937-11	CERAMIC CHIP	0.001uF	10%	50V
C733	1-114-582-91	CERAMIC CHIP	0.1uF	10%	16V
C734	1-164-860-11	CERAMIC CHIP	27PF	5%	50V
C735	1-114-582-91	CERAMIC CHIP	0.1uF	10%	16V
C737	1-165-884-91	CERAMIC CHIP	2.2uF	10%	6.3V
C738	1-165-884-91	CERAMIC CHIP	2.2uF	10%	6.3V
C739	1-114-582-91	CERAMIC CHIP	0.1uF	10%	16V
C742	1-165-884-91	CERAMIC CHIP	2.2uF	10%	6.3V
C744	1-165-884-91	CERAMIC CHIP	2.2uF	10%	6.3V
C746	1-165-884-91	CERAMIC CHIP	2.2uF	10%	6.3V
C747	1-164-939-11	CERAMIC CHIP	0.0022uF	10%	50V
C748	1-164-939-11	CERAMIC CHIP	0.0022uF	10%	50V
C750	1-126-603-11	ELECT CHIP	4.7uF	20%	35V
C751	1-126-603-11	ELECT CHIP	4.7uF	20%	35V
C752	1-126-603-11	ELECT CHIP	4.7uF	20%	35V
C753	1-126-603-11	ELECT CHIP	4.7uF	20%	35V
C754	1-116-728-11	CERAMIC CHIP	2.2uF	10%	10V
C756	1-164-937-11	CERAMIC CHIP	0.001uF	10%	50V
C757	1-164-937-11	CERAMIC CHIP	0.001uF	10%	50V
C759	1-100-567-81	CERAMIC CHIP	0.01uF	10%	25V
C760	1-100-597-91	CERAMIC CHIP	0.1uF	10%	25V
C761	1-100-597-91	CERAMIC CHIP	0.1uF	10%	25V
C767	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C768	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C771	1-164-866-11	CERAMIC CHIP	47PF	5%	50V
C772	1-127-988-81	CERAMIC CHIP	0.015uF	10%	16V
C776	1-100-597-91	CERAMIC CHIP	0.1uF	10%	25V
C777	1-100-567-81	CERAMIC CHIP	0.01uF	10%	25V
C778	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C779	1-100-567-81	CERAMIC CHIP	0.01uF	10%	25V
C780	1-100-579-81	CERAMIC CHIP	0.0056uF	10%	25V
C781	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C782	1-114-582-91	CERAMIC CHIP	0.1uF	10%	16V
C783	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C784	1-164-245-11	CERAMIC CHIP	0.015uF	10%	25V
C786	1-114-582-91	CERAMIC CHIP	0.1uF	10%	16V
C787	1-114-582-91	CERAMIC CHIP	0.1uF	10%	16V
C788	1-115-416-11	CERAMIC CHIP	0.001uF	5%	25V
C789	1-164-939-11	CERAMIC CHIP	0.0022uF	10%	50V
C792	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C794	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C796	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C797	1-116-728-11	CERAMIC CHIP	2.2uF	10%	10V
C798	1-116-728-11	CERAMIC CHIP	2.2uF	10%	10V
C801	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C802	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C830	1-114-582-91	CERAMIC CHIP	0.1uF	10%	16V (US, CND)
C831	1-114-582-91	CERAMIC CHIP	0.1uF	10%	16V (US, CND)
C876	1-164-937-11	CERAMIC CHIP	0.001uF	10%	50V (US, CND)
C877	1-164-874-11	CERAMIC CHIP	100PF	5%	50V (US, CND)
C878	1-164-874-11	CERAMIC CHIP	100PF	5%	50V (US, CND)
C1301	1-100-591-91	CERAMIC CHIP	1uF	10%	25V
C1304	1-116-705-11	CERAMIC CHIP	47uF	20%	16V
C1305	1-100-055-21	CERAMIC CHIP	22uF	20%	16V
C1306	1-164-936-11	CERAMIC CHIP	680PF	10%	50V
C1307	1-164-943-81	CERAMIC CHIP	0.01uF	10%	16V
C1308	1-114-983-91	CERAMIC CHIP	2.2uF	10%	16V
C1309	1-114-323-11	CERAMIC CHIP	0.01uF	10%	50V
C1310	1-114-582-91	CERAMIC CHIP	0.1uF	10%	16V
C1311	1-117-681-11	ELECT CHIP	100uF	20%	16V
C1312	1-100-567-81	CERAMIC CHIP	0.01uF	10%	25V
C1315	1-100-055-21	CERAMIC CHIP	22uF	20%	16V
C1316	1-112-298-91	CERAMIC CHIP	1uF	10%	16V
C1318	1-164-937-11	CERAMIC CHIP	0.001uF	10%	50V
C1320	1-100-597-91	CERAMIC CHIP	0.1uF	10%	25V
C1325	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C1326	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C1327	1-164-866-11	CERAMIC CHIP	47PF	5%	50V
		< TUNER UNIT/CONNECTOR >			
CN01	A-1878-198-A	TUX-DSP02 (TUNER UNIT)			
CN102	1-843-515-11	SOCKET, CONNECTOR 20P			
CN301	1-843-330-11	PIN, CONNECTOR 16P			
CN700	1-842-487-12	CONNECTOR, BOARD TO BOARD 28P			
CN802	1-779-886-11	SOCKET, MINIATURE DIN CONNECTOR (SIRIUSXM IN)			(US, CND)
		< JUMPER RESISTOR/DIODE >			
D110	1-216-864-11	SHORT CHIP	0		
D114	6-503-205-01	DIODE	RKZ6.8B2KGP1		
D115	6-503-205-01	DIODE	RKZ6.8B2KGP1		
D119	6-503-205-01	DIODE	RKZ6.8B2KGP1		
D306	6-503-238-01	DIODE	GN1G (AEP, UK)		
D307	6-503-213-01	DIODE	RKZ18B2KGP1		
D308	6-502-961-01	DIODE	DA2J10100L		
D318	6-503-238-01	DIODE	GN1G		
D321	6-503-238-01	DIODE	GN1G		
D323	6-503-213-01	DIODE	RKZ18B2KGP1		
D324	6-503-238-01	DIODE	GN1G		
D401	6-502-961-01	DIODE	DA2J10100L		

MAIN

Ref. No.	Part No.	Description	Remark
D530	6-503-759-01	DIODE RB751V40, 115	
D602	6-503-759-01	DIODE RB751V40, 115	
D805	6-503-206-01	DIODE RKZ7.5B2KGP1	
D806	6-503-213-01	DIODE RKZ18B2KGP1	
D820	6-503-213-01	DIODE RKZ18B2KGP1 (US, CND)	
D830	6-503-213-01	DIODE RKZ18B2KGP1 (US, CND)	
D831	6-503-213-01	DIODE RKZ18B2KGP1 (US, CND)	
D832	6-503-213-01	DIODE RKZ18B2KGP1 (US, CND)	
D1300	6-503-548-01	DIODE DB2441600L	
		< FUSE >	
F3	1-576-415-11	FUSE (2 A/32 V) (US, CND)	
		< FERRITE BEAD/JUMPER RESISTOR >	
FB19	1-400-334-21	FERRITE, EMI (SMD) (1608) (US, CND)	
FB306	1-500-113-22	BEAD, FERRITE (CHIP) (1608)	
FB314	1-481-051-21	BEAD, FERRITE (CHIP) (1608)	
FB398	1-469-084-21	INDUCTOR, FERRITE BEAD (1005)	
FB401	1-500-113-22	BEAD, FERRITE (CHIP) (1608) (E, IND)	
FB404	1-400-040-22	BEAD, FERRITE (CHIP) (1608)	
FB405	1-400-040-22	BEAD, FERRITE (CHIP) (1608)	
FB406	1-400-040-22	BEAD, FERRITE (CHIP) (1608)	
FB407	1-400-040-22	BEAD, FERRITE (CHIP) (1608)	
FB408	1-400-040-22	BEAD, FERRITE (CHIP) (1608)	
FB410	1-400-040-22	BEAD, FERRITE (CHIP) (1608)	
FB411	1-400-632-21	BEAD, FERRITE (1005)	
FB412	1-400-632-21	BEAD, FERRITE (1005)	
FB413	1-400-632-21	BEAD, FERRITE (1005)	
FB414	1-400-632-21	BEAD, FERRITE (1005)	
FB415	1-400-632-21	BEAD, FERRITE (1005)	
FB416	1-481-051-21	BEAD, FERRITE (CHIP) (1608)	
FB420	1-500-113-22	BEAD, FERRITE (CHIP) (1608)	
FB458	1-481-051-21	BEAD, FERRITE (CHIP) (1608) (E, IND)	
FB460	1-400-632-21	BEAD, FERRITE (1005) (E, IND)	
FB461	1-400-632-21	BEAD, FERRITE (1005) (E, IND)	
FB462	1-400-632-21	BEAD, FERRITE (1005) (E, IND)	
FB463	1-400-632-21	BEAD, FERRITE (1005) (E, IND)	
FB464	1-400-632-21	BEAD, FERRITE (1005) (E, IND)	
FB501	1-414-595-11	INDUCTOR, FERRITE BEAD	
FB722	1-218-990-81	SHORT CHIP 0	
FB724	1-469-084-21	INDUCTOR, FERRITE BEAD (1005)	
FB782	1-469-084-21	INDUCTOR, FERRITE BEAD (1005)	
FB801	1-500-113-22	BEAD, FERRITE (CHIP) (1608)	
FB802	1-500-113-22	BEAD, FERRITE (CHIP) (1608)	
FB803	1-500-113-22	BEAD, FERRITE (CHIP) (1608)	
FB890	1-500-113-22	BEAD, FERRITE (CHIP) (1608)	
FB891	1-500-113-22	BEAD, FERRITE (CHIP) (1608)	
FB1301	1-216-864-11	SHORT CHIP 0	
		< IC >	
IC301	6-715-848-21	IC TDF8556AJ/N5	
IC401	6-714-623-01	IC BD3467FV-E2	
IC402	6-720-463-01	IC MM1886A33NRE	
IC404	6-718-435-01	IC NJW1240V (TE2) (E, IND)	
IC501	6-719-019-02	IC R5F3650ECDZ98FB (for SERVICE) (AEP, RU, UK, E, IND)	
IC501	6-719-022-02	IC R5F3650KCDZ95FB (for SERVICE) (US, CND)	
IC601	6-715-714-01	IC TMPM320C1DFG-9999	
IC602	6-719-044-02	IC W25Q16CVSSIG-A02 (for SERVICE)	
IC603	6-717-694-01	IC BU33TD3WG-TR	
IC681	6-716-355-01	IC BU15TD3WG-TR	
IC682	6-716-355-01	IC BU15TD3WG-TR	
IC701	6-715-712-11	IC TC94A99FG-003 (SY, H	
IC703	6-715-716-01	IC S-1206B12-U3T1G	
IC704	6-718-324-01	IC MFI337S3959	
IC830	6-710-376-01	IC 74LVC1G17GW-125 (US, CND)	
IC831	6-709-182-01	IC TC7WH126FK (US, CND)	
IC1300	6-718-913-01	IC OZ539IGN-A1-0-TR	
		< JACK >	
J1	1-843-172-11	JACK (ANT) (ANTENNA IN)	
J403	1-822-714-21	JACK, PIN 6P (FRONT/REAR/SUB AUDIO OUT)	
J801	1-566-822-81	JACK (REMOTE IN)	
		< COIL >	
L1	1-400-073-21	INDUCTOR 4.7uH	
L101	1-469-844-11	INDUCTOR 2.2uH	
L301	1-460-443-11	CHOKE COIL 140uH	
L395	1-469-844-11	INDUCTOR 2.2uH	
L396	1-400-073-21	INDUCTOR 4.7uH	
L431	1-469-844-11	INDUCTOR 2.2uH	
L1301	1-457-630-11	COIL, CHOKE 47uH	
		< TRANSISTOR >	
Q301	6-552-892-01	TRANSISTOR LSCR523UBFS8TL	
Q302	6-552-892-01	TRANSISTOR LSCR523UBFS8TL	
Q401	6-552-937-01	TRANSISTOR LTC014TUBFS8TL	
Q402	6-552-937-01	TRANSISTOR LTC014TUBFS8TL	
Q403	6-552-937-01	TRANSISTOR LTC014TUBFS8TL	
Q404	6-552-937-01	TRANSISTOR LTC014TUBFS8TL	
Q405	6-552-937-01	TRANSISTOR LTC014TUBFS8TL	
Q407	6-552-922-01	TRANSISTOR LTA014EUBFS8TL	
Q408	6-552-922-01	TRANSISTOR LTA014EUBFS8TL	
Q409	6-552-936-01	TRANSISTOR LTC014EUBFS8TL	
Q710	6-551-120-01	TRANSISTOR 2SA2119K	
Q801	6-552-949-01	TRANSISTOR LTC044EUBFS8TL	
Q802	6-552-936-01	TRANSISTOR LTC014EUBFS8TL	
Q803	6-552-892-01	TRANSISTOR LSCR523UBFS8TL	
		< RESISTOR >	
R10	1-218-990-81	SHORT CHIP 0	
R13	1-216-821-11	METAL CHIP 1K 5% 1/10W	
R15	1-114-811-11	CERAMIC CHIP 0.0033uF 10% 50V (RU)	
R19	1-216-864-11	SHORT CHIP 0 (AEP, RU, UK, E, IND)	
R100	1-216-864-11	SHORT CHIP 0	
R101	1-216-296-11	SHORT CHIP 0	
R102	1-216-864-11	SHORT CHIP 0	
R107	1-216-296-11	SHORT CHIP 0	
R200	1-216-864-11	SHORT CHIP 0	
R201	1-216-295-91	SHORT CHIP 0	
R203	1-216-864-11	SHORT CHIP 0	
R300	1-216-296-11	SHORT CHIP 0	
R301	1-218-941-81	METAL CHIP 100 5% 1/16W	
R302	1-218-941-81	METAL CHIP 100 5% 1/16W	
R303	1-216-182-00	METAL CHIP 220 5% 1/8W (US, CND, AEP, RU, UK)	
R303	1-216-214-00	METAL CHIP 4.7K 5% 1/8W (E, IND)	
R304	1-216-182-00	METAL CHIP 220 5% 1/8W (US, CND, AEP, RU, UK)	

Note: When IC501 is replaced, the destination setting is necessary. Refer to “NOTE THE MAIN BOARD OR SYSTEM CONTROLLER (IC501) REPLACING” on page 4.

Ref. No.	Part No.	Description			Remark
R304	1-216-214-00	METAL CHIP	4.7K	5%	1/8W (E, IND)
R305	1-216-182-00	METAL CHIP	220	5%	1/8W (US, CND, AEP, RU, UK)
R305	1-216-214-00	METAL CHIP	4.7K	5%	1/8W (E, IND)
R306	1-216-182-00	METAL CHIP	220	5%	1/8W (US, CND, AEP, RU, UK)
R306	1-216-214-00	METAL CHIP	4.7K	5%	1/8W (E, IND)
R307	1-218-943-11	METAL CHIP	150	5%	1/16W
R308	1-216-864-11	SHORT CHIP	0		
R309	1-218-973-11	METAL CHIP	47K	5%	1/16W
R310	1-114-811-11	CERAMIC CHIP	0.0033uF	10%	50V (RU)
R310	1-115-416-11	CERAMIC CHIP	0.001uF	5%	25V (EXCEPT RU)
R311	1-216-073-91	METAL CHIP	10K	5%	1/10W
R312	1-218-973-11	METAL CHIP	47K	5%	1/16W
R313	1-218-973-11	METAL CHIP	47K	5%	1/16W
R314	1-218-961-11	METAL CHIP	4.7K	5%	1/16W
R315	1-218-969-11	METAL CHIP	22K	5%	1/16W
R316	1-218-977-11	METAL CHIP	100K	5%	1/16W
R317	1-216-214-00	METAL CHIP	4.7K	5%	1/8W
R322	1-216-296-11	SHORT CHIP	0		
R323	1-216-821-11	METAL CHIP	1K	5%	1/10W
R324	1-216-821-11	METAL CHIP	1K	5%	1/10W
R325	1-216-821-11	METAL CHIP	1K	5%	1/10W
R326	1-216-821-11	METAL CHIP	1K	5%	1/10W
R340	1-216-864-11	SHORT CHIP	0		
R378	1-216-073-91	METAL CHIP	10K	5%	1/10W
R387	1-216-864-11	SHORT CHIP	0		
R396	1-216-296-11	SHORT CHIP	0		
R400	1-216-864-11	SHORT CHIP	0		
R404	1-218-945-11	METAL CHIP	220	5%	1/16W
R405	1-216-841-11	METAL CHIP	47K	5%	1/10W
R407	1-218-945-11	METAL CHIP	220	5%	1/16W
R409	1-216-833-11	METAL CHIP	10K	5%	1/10W (US, CND, AEP, RU, UK)
R409	1-216-841-11	METAL CHIP	47K	5%	1/10W (E, IND)
R410	1-218-945-11	METAL CHIP	220	5%	1/16W
R411	1-216-833-11	METAL CHIP	10K	5%	1/10W (US, CND, AEP, RU, UK)
R411	1-216-841-11	METAL CHIP	47K	5%	1/10W (E, IND)
R412	1-218-990-81	SHORT CHIP	0		
R415	1-216-821-11	METAL CHIP	1K	5%	1/10W
R416	1-216-821-11	METAL CHIP	1K	5%	1/10W
R417	1-218-966-11	METAL CHIP	12K	5%	1/16W
R418	1-218-966-11	METAL CHIP	12K	5%	1/16W
R419	1-218-957-11	METAL CHIP	2.2K	5%	1/16W
R421	1-218-945-11	METAL CHIP	220	5%	1/16W
R422	1-216-833-11	METAL CHIP	10K	5%	1/10W (US, CND, AEP, RU, UK)
R422	1-216-841-11	METAL CHIP	47K	5%	1/10W (E, IND)
R423	1-218-945-11	METAL CHIP	220	5%	1/16W
R424	1-216-833-11	METAL CHIP	10K	5%	1/10W (US, CND, AEP, RU, UK)
R424	1-216-841-11	METAL CHIP	47K	5%	1/10W (E, IND)
R425	1-216-864-11	SHORT CHIP	0		

Ref. No.	Part No.	Description			Remark
R426	1-216-296-11	SHORT CHIP	0		
R427	1-218-990-81	SHORT CHIP	0		
R429	1-218-933-11	METAL CHIP	22	5%	1/16W
R432	1-218-965-11	METAL CHIP	10K	5%	1/16W
R433	1-216-296-11	SHORT CHIP	0		
R434	1-216-295-91	SHORT CHIP	0		
R442	1-216-864-11	SHORT CHIP	0 (US, CND, AEP, RU, UK)		
R443	1-216-864-11	SHORT CHIP	0 (US, CND, AEP, RU, UK)		
R444	1-216-864-11	SHORT CHIP	0 (US, CND, AEP, RU, UK)		
R445	1-216-864-11	SHORT CHIP	0 (US, CND, AEP, RU, UK)		
R446	1-216-864-11	SHORT CHIP	0 (US, CND, AEP, RU, UK)		
R454	1-218-987-11	METAL CHIP	680K	5%	1/16W (E, IND)
R455	1-218-929-11	METAL CHIP	10	5%	1/16W (E, IND)
R457	1-218-953-11	METAL CHIP	1K	5%	1/16W (E, IND)
R462	1-216-864-11	SHORT CHIP	0 (US, CND, AEP, RU, UK)		
R463	1-216-864-11	SHORT CHIP	0 (US, CND, AEP, RU, UK)		
R464	1-216-864-11	SHORT CHIP	0 (US, CND, AEP, RU, UK)		
R465	1-216-864-11	SHORT CHIP	0 (US, CND, AEP, RU, UK)		
R466	1-216-864-11	SHORT CHIP	0 (US, CND, AEP, RU, UK)		
R467	1-218-965-11	METAL CHIP	10K	5%	1/16W (E, IND)
R468	1-216-864-11	SHORT CHIP	0		
R469	1-216-864-11	SHORT CHIP	0		
R470	1-216-864-11	SHORT CHIP	0		
R471	1-216-864-11	SHORT CHIP	0		
R472	1-216-864-11	SHORT CHIP	0		
R473	1-216-864-11	SHORT CHIP	0		
R474	1-469-844-11	INDUCTOR	2.2uH (E, IND)		
R482	1-218-990-81	SHORT CHIP	0 (E, IND)		
R483	1-218-990-81	SHORT CHIP	0 (E, IND)		
R484	1-218-990-81	SHORT CHIP	0 (E, IND)		
R485	1-218-990-81	SHORT CHIP	0 (E, IND)		
R486	1-218-990-81	SHORT CHIP	0 (E, IND)		
R490	1-216-813-11	METAL CHIP	220	5%	1/10W
R491	1-216-813-11	METAL CHIP	220	5%	1/10W
R492	1-216-813-11	METAL CHIP	220	5%	1/10W
R493	1-216-813-11	METAL CHIP	220	5%	1/10W
R494	1-216-813-11	METAL CHIP	220	5%	1/10W
R495	1-216-813-11	METAL CHIP	220	5%	1/10W
R502	1-218-977-11	METAL CHIP	100K	5%	1/16W
R505	1-218-961-11	METAL CHIP	4.7K	5%	1/16W
R506	1-218-981-91	METAL CHIP	220K	5%	1/16W
R507	1-218-977-11	METAL CHIP	100K	5%	1/16W
R508	1-218-957-11	METAL CHIP	2.2K	5%	1/16W (E, IND)
R510	1-216-809-11	METAL CHIP	100	5%	1/10W
R511	1-216-809-11	METAL CHIP	100	5%	1/10W
R514	1-250-519-11	METAL CHIP	10K	1%	1/16W
R515	1-250-519-11	METAL CHIP	10K	1%	1/16W
R516	1-250-519-11	METAL CHIP	10K	1%	1/16W
R517	1-218-953-11	METAL CHIP	1K	5%	1/16W
R518	1-218-953-11	METAL CHIP	1K	5%	1/16W
R519	1-216-864-11	SHORT CHIP	0 (E, IND)		
R521	1-218-971-11	METAL CHIP	33K	5%	1/16W
R522	1-218-971-11	METAL CHIP	33K	5%	1/16W
R523	1-218-941-81	METAL CHIP	100	5%	1/16W
R524	1-218-941-81	METAL CHIP	100	5%	1/16W
R525	1-218-941-81	METAL CHIP	100	5%	1/16W

MAIN

Ref. No.	Part No.	Description			Remark
R535	1-218-953-11	METAL CHIP	1K	5%	1/16W
R536	1-218-977-11	METAL CHIP	100K	5%	1/16W
R540	1-218-977-11	METAL CHIP	100K	5%	1/16W
R541	1-245-604-11	METAL CHIP	10M	5%	1/16W
R542	1-218-981-91	METAL CHIP	220K	5%	1/16W
R543	1-218-990-81	SHORT CHIP	0		
R544	1-216-857-11	METAL CHIP	1M	5%	1/10W
R545	1-218-977-11	METAL CHIP	100K	5%	1/16W
R548	1-218-990-81	SHORT CHIP	0		
R550	1-218-977-11	METAL CHIP	100K	5%	1/16W
R552	1-218-941-81	METAL CHIP	100	5%	1/16W
R553	1-218-990-81	SHORT CHIP	0		
R554	1-218-977-11	METAL CHIP	100K	5%	1/16W
R555	1-218-990-81	SHORT CHIP	0		
R556	1-218-957-11	METAL CHIP	2.2K	5%	1/16W
R557	1-218-957-11	METAL CHIP	2.2K	5%	1/16W
R560	1-218-977-11	METAL CHIP	100K	5%	1/16W
R561	1-218-990-81	SHORT CHIP	0		
R562	1-218-990-81	SHORT CHIP	0		
R563	1-218-941-81	METAL CHIP	100	5%	1/16W
R567	1-218-977-11	METAL CHIP	100K	5%	1/16W
R568	1-216-845-11	METAL CHIP	100K	5%	1/10W
R569	1-218-977-11	METAL CHIP	100K	5%	1/16W
R570	1-218-941-81	METAL CHIP	100	5%	1/16W
R572	1-218-941-81	METAL CHIP	100	5%	1/16W
R573	1-218-941-81	METAL CHIP	100	5%	1/16W
R575	1-218-977-11	METAL CHIP	100K	5%	1/16W
R576	1-218-977-11	METAL CHIP	100K	5%	1/16W
R577	1-218-977-11	METAL CHIP	100K	5%	1/16W
R578	1-218-965-11	METAL CHIP	10K	5%	1/16W
R579	1-218-965-11	METAL CHIP	10K	5%	1/16W
R580	1-218-977-11	METAL CHIP	100K	5%	1/16W
R581	1-218-977-11	METAL CHIP	100K	5%	1/16W
R582	1-218-971-11	METAL CHIP	33K	5%	1/16W
R583	1-220-200-81	METAL CHIP	30K	5%	1/16W
R584	1-218-977-11	METAL CHIP	100K	5%	1/16W
R587	1-218-990-81	SHORT CHIP	0		
R588	1-218-977-11	METAL CHIP	100K	5%	1/16W
R590	1-218-990-81	SHORT CHIP	0		
R595	1-216-809-11	METAL CHIP	100	5%	1/10W
R601	1-218-959-11	METAL CHIP	3.3K	5%	1/16W
R602	1-216-857-11	METAL CHIP	1M	5%	1/10W
R604	1-216-809-11	METAL CHIP	100	5%	1/10W
R607	1-218-965-11	METAL CHIP	10K	5%	1/16W
R610	1-218-965-11	METAL CHIP	10K	5%	1/16W
R611	1-218-977-11	METAL CHIP	100K	5%	1/16W
R612	1-218-977-11	METAL CHIP	100K	5%	1/16W
R614	1-218-941-81	METAL CHIP	100	5%	1/16W
R615	1-218-941-81	METAL CHIP	100	5%	1/16W
R616	1-218-977-11	METAL CHIP	100K	5%	1/16W
R619	1-216-813-11	METAL CHIP	220	5%	1/10W
R621	1-216-817-11	METAL CHIP	470	5%	1/10W
R623	1-216-813-11	METAL CHIP	220	5%	1/10W
R631	1-218-941-81	METAL CHIP	100	5%	1/16W
R632	1-218-941-81	METAL CHIP	100	5%	1/16W
R633	1-218-941-81	METAL CHIP	100	5%	1/16W
R634	1-218-941-81	METAL CHIP	100	5%	1/16W
R635	1-218-941-81	METAL CHIP	100	5%	1/16W
R636	1-218-941-81	METAL CHIP	100	5%	1/16W
R637	1-218-990-81	SHORT CHIP	0		

Ref. No.	Part No.	Description			Remark
R638	1-218-977-11	METAL CHIP	100K	5%	1/16W
R639	1-218-977-11	METAL CHIP	100K	5%	1/16W
R641	1-218-977-11	METAL CHIP	100K	5%	1/16W
R643	1-218-977-11	METAL CHIP	100K	5%	1/16W
R644	1-218-977-11	METAL CHIP	100K	5%	1/16W
R645	1-218-977-11	METAL CHIP	100K	5%	1/16W
R646	1-218-957-11	METAL CHIP	2.2K	5%	1/16W
R647	1-218-957-11	METAL CHIP	2.2K	5%	1/16W
R656	1-216-845-11	METAL CHIP	100K	5%	1/10W
R664	1-218-990-81	SHORT CHIP	0		
R672	1-218-977-11	METAL CHIP	100K	5%	1/16W
R673	1-218-990-81	SHORT CHIP	0		
R674	1-218-977-11	METAL CHIP	100K	5%	1/16W
R677	1-218-990-81	SHORT CHIP	0		
R678	1-218-990-81	SHORT CHIP	0		
R679	1-218-965-11	METAL CHIP	10K	5%	1/16W
R680	1-218-961-11	METAL CHIP	4.7K	5%	1/16W
R682	1-218-990-81	SHORT CHIP	0		
R693	1-218-990-81	SHORT CHIP	0		
R698	1-218-977-11	METAL CHIP	100K	5%	1/16W
R710	1-218-953-11	METAL CHIP	1K	5%	1/16W
R711	1-218-929-11	METAL CHIP	10	5%	1/16W
R712	1-220-802-11	METAL CHIP	3.3	5%	1/16W
R714	1-218-990-81	SHORT CHIP	0		
R715	1-216-864-11	SHORT CHIP	0		
R716	1-218-990-81	SHORT CHIP	0		
R717	1-218-947-11	METAL CHIP	330	5%	1/16W
R718	1-218-947-11	METAL CHIP	330	5%	1/16W
R719	1-218-947-11	METAL CHIP	330	5%	1/16W
R720	1-218-947-11	METAL CHIP	330	5%	1/16W
R721	1-218-947-11	METAL CHIP	330	5%	1/16W
R722	1-218-989-11	METAL CHIP	1M	5%	1/16W
R723	1-218-955-11	METAL CHIP	1.5K	5%	1/16W
R724	1-218-958-11	METAL CHIP	2.7K	5%	1/16W
R725	1-218-958-11	METAL CHIP	2.7K	5%	1/16W
R726	1-218-965-11	METAL CHIP	10K	5%	1/16W
R727	1-218-965-11	METAL CHIP	10K	5%	1/16W
R732	1-218-941-81	METAL CHIP	100	5%	1/16W
R733	1-218-941-81	METAL CHIP	100	5%	1/16W
R736	1-218-977-11	METAL CHIP	100K	5%	1/16W
R740	1-218-953-11	METAL CHIP	1K	5%	1/16W
R741	1-218-941-81	METAL CHIP	100	5%	1/16W
R742	1-216-841-11	METAL CHIP	47K	5%	1/10W
R743	1-218-967-11	METAL CHIP	15K	5%	1/16W
R744	1-218-983-11	METAL CHIP	330K	5%	1/16W
R745	1-218-941-81	METAL CHIP	100	5%	1/16W
R746	1-218-990-81	SHORT CHIP	0		
R747	1-218-990-81	SHORT CHIP	0		
R748	1-218-990-81	SHORT CHIP	0		
R749	1-218-990-81	SHORT CHIP	0		
R750	1-218-969-11	METAL CHIP	22K	5%	1/16W
R751	1-218-969-11	METAL CHIP	22K	5%	1/16W
R763	1-216-864-11	SHORT CHIP	0		
R765	1-216-864-11	SHORT CHIP	0		
R766	1-216-864-11	SHORT CHIP	0		
R767	1-218-977-11	METAL CHIP	100K	5%	1/16W
R768	1-250-337-21	METAL CHIP	44.2	1%	1/10W
R770	1-218-941-81	METAL CHIP	100	5%	1/16W
R790	1-216-864-11	SHORT CHIP	0		
R818	1-218-981-91	METAL CHIP	220K	5%	1/16W

Ref. No.	Part No.	Description			Remark
R819	1-218-953-11	METAL CHIP	1K	5%	1/16W
R820	1-218-953-11	METAL CHIP	1K	5%	1/16W
R830	1-218-972-11	METAL CHIP	39K	5%	1/16W (US, CND)
R831	1-218-977-11	METAL CHIP	100K	5%	1/16W (US, CND)
R833	1-218-975-11	METAL CHIP	68K	5%	1/16W (US, CND)
R833	1-218-977-11	METAL CHIP	100K	5%	1/16W (AEP, UK, RU, E, IND)
R834	1-218-977-11	METAL CHIP	100K	5%	1/16W (US, CND)
R836	1-216-801-11	METAL CHIP	22	5%	1/10W (US, CND)
R837	1-216-864-11	SHORT CHIP	0 (US, CND)		
R855	1-216-809-11	METAL CHIP	100	5%	1/10W (US, CND)
R856	1-216-809-11	METAL CHIP	100	5%	1/10W (US, CND)
R857	1-216-809-11	METAL CHIP	100	5%	1/10W (US, CND)
R864	1-216-864-11	SHORT CHIP	0		
R870	1-218-957-11	METAL CHIP	2.2K	5%	1/16W (US, CND)
R871	1-218-966-11	METAL CHIP	12K	5%	1/16W (US, CND)
R872	1-218-966-11	METAL CHIP	12K	5%	1/16W (US, CND)
R873	1-216-864-11	SHORT CHIP	0 (US, CND)		
R874	1-216-821-11	METAL CHIP	1K	5%	1/10W (US, CND)
R875	1-216-821-11	METAL CHIP	1K	5%	1/10W (US, CND)
R899	1-216-295-91	SHORT CHIP	0		
R1300	1-218-953-11	METAL CHIP	1K	5%	1/16W
R1301	1-216-809-11	METAL CHIP	100	5%	1/10W
R1302	1-218-977-11	METAL CHIP	100K	5%	1/16W
R1305	1-218-965-11	METAL CHIP	10K	5%	1/16W
R1307	1-208-933-11	METAL CHIP	82K	0.5%	1/16W
R1308	1-208-933-11	METAL CHIP	82K	0.5%	1/16W
R1311	1-208-721-11	METAL CHIP	39K	0.5%	1/16W
R1312	1-208-911-11	METAL CHIP	10K	0.5%	1/16W
R1313	1-218-979-11	METAL CHIP	150K	5%	1/16W
R1314	1-216-296-11	SHORT CHIP	0		
R1315	1-218-965-11	METAL CHIP	10K	5%	1/16W
R1316	1-218-977-11	METAL CHIP	100K	5%	1/16W
R1320	1-218-953-11	METAL CHIP	1K	5%	1/16W
		< VIBRATOR >			
X501	1-814-626-11	VIBRATOR, CRYSTAL (7.92 MHz)			
X502	1-814-629-11	VIBRATOR, CRYSTAL (32.768 kHz)			
X601	1-814-304-11	VIBRATOR, CRYSTAL (12 MHz)			
X701	1-795-561-21	VIBRATOR, CERAMIC (16.934 MHz)			

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SENSOR BOARD
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When the SENSOR board is defective, exchange the MECHANICAL BLOCK ASSY.
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Ref. No.	Part No.	Description	Remark
	A-1866-089-A	SERVO BOARD, COMPLETE **********************	

When the SERVO board is defective, exchange the complete mounted board.
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MISCELLANEOUS
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Ref. No.	Part No.	Description	Remark
CDM1	A-1866-801-A	MECHANICAL BLOCK (11CA) ASSY	(US, CND, AEP, RU, UK, E)
CDM1	A-1922-404-A	MECHANICAL BLOCK (11CA2) ASSY (IND)	
⚠ DAX1	A-1284-705-A	DAXEV08	
FU1	1-523-227-11	MINI FUSE (BLADE TYPE) (10 A/32 V)	
MJ1	1-846-310-11	CABLE, CONNECTION (MIC) (MIC IN)	
⚠ OP1	X-2149-672-1	OPTICAL PICK-UP (DAX-25A) (for SERVICE)	
PW1	1-846-033-11	CONNECTION CABLE (ISO) (POWER)	(AEP, RU, UK)
PW1	1-846-037-11	CONNECTION CABLE, AUTOMOBILE (POWER)	(US, CND, E, IND)

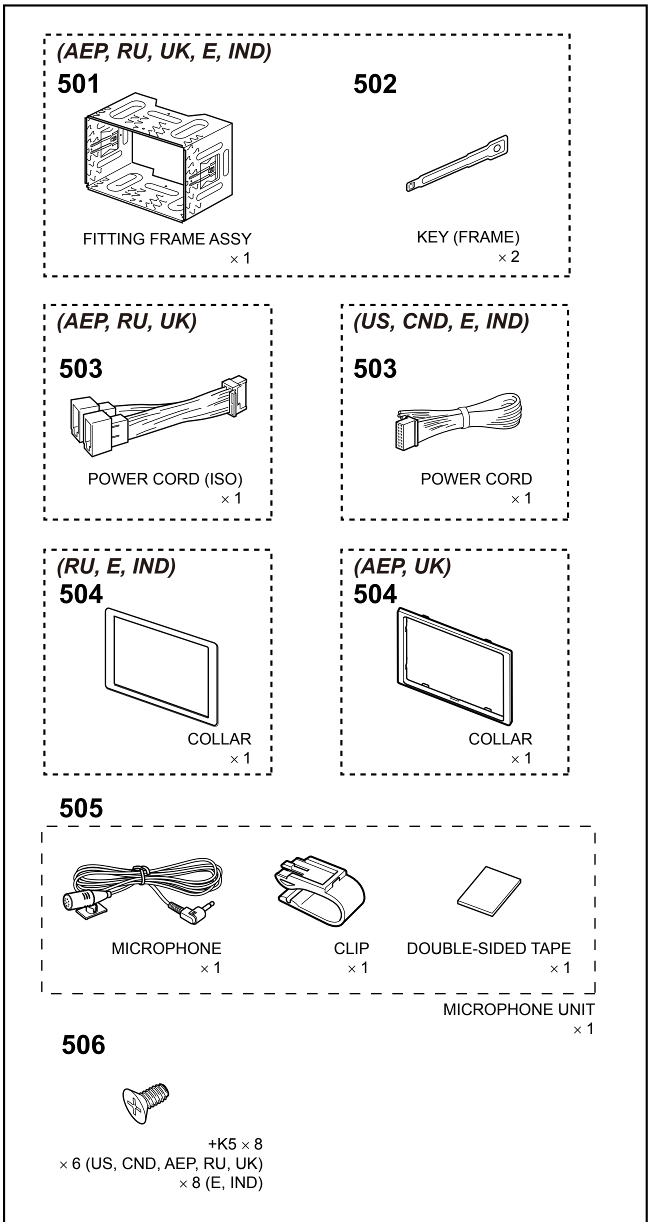
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ACCESSORIES
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Ref. No.	Part No.	Description	Remark
	1-489-810-41	REMOTE COMMANDER (RM-X231)	
	4-440-626-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH)	(US, CND)
	4-440-626-21	MANUAL, INSTRUCTION (ENGLISH, SPANISH)	(E, IND)
	4-440-626-31	MANUAL, INSTRUCTION (RUSSIAN, UKRAINIAN)	(RU)
	4-440-626-51	MANUAL, INSTRUCTION (ENGLISH, FRENCH, GERMAN, DUTCH, ITALIAN)	(AEP, UK)
	4-440-627-11	MANUAL, INSTRUCTION, INSTALL (ENGLISH, FRENCH)	(US, CND)
	4-440-627-22	MANUAL, INSTRUCTION, INSTALL (ENGLISH, SPANISH)	(E, IND)
	4-440-627-31	MANUAL, INSTRUCTION, INSTALL (RUSSIAN, UKRAINIAN)	(RU)
	4-440-627-51	MANUAL, INSTRUCTION, INSTALL (ENGLISH, FRENCH, GERMAN, DUTCH, ITALIAN)	(AEP, UK)

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Ref. No.	Part No.	Description	Remark
		PARTS FOR INSTALLATION AND CONNECTIONS **************************************	
501	X-2514-519-3	FRAME, FITTING ASSY (AEP, RU, UK, E, IND)	
502	3-876-675-01	KEY (FRAME) (1 piece) (AEP, RU, UK, E, IND)	
503	1-846-033-11	CONNECTION CABLE (ISO) (POWER) (AEP, RU, UK)	
503	1-846-037-11	CONNECTION CABLE, AUTOMOBILE (POWER) (US, CND, E, IND)	
504	4-148-662-01	COLLAR (RU, E, IND)	
504	4-413-144-01	COLLAR (AEP, UK)	
505	1-542-870-11	MICROPHONE UNIT (Including CLIP, DOUBLE-SIDED TAPE)	
506	3-934-325-01	SCREW, +K (5X8) TAPPING (1 piece)	



MEMO

REVISION HISTORY

Checking the version allows you to jump to the revised page.
Also, clicking the version at the top of the revised page allows you to jump to the next revised page.

Ver.	Date	Description of Revision
1.0	2012.12	New